

County Borough



of Blackburn.

# ANNUAL REPORT

UPON THE

## Health of Blackburn

For the Year 1929,

BY

V. T. THIERENS, M.B., Ch.B. (L'pool), D.P.H. (Cambridge),

MEDICAL OFFICER OF HEALTH,

ADMINISTRATIVE TUBERCULOSIS OFFICER,

MEDICAL SUPERINTENDENT OF THE CORPORATION HOSPITALS,

SCHOOL MEDICAL OFFICER.

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BLACKBURN:

THOMAS BRIDGE (BLACKBURN) LTD., 75, CORPORATION.



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THOMAS BRIGGS (BLACKBURN) LTD., 73 NORTHGATE.



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# Health & Maternity & Child Welfare Committee.

December, 1929.

THE MAYOR (LUKE BATES, Esq., J.P.).

ALDERMAN F. J. GREEVES, J.P., L.R.C.P., Chairman,

ALDERMEN—

WATSON, J.P., RAMSAY, J.P., L.R.C.P., BURKE, HEYES AND SMETHURST.

COUNCILLORS

BEARDWOOD, H.  
BLACKSHAW  
BROTHERS  
CALVERT  
CAMPBELL

CRITCHLEY  
COTTON  
DOWDALL  
EDDIE (Vice-Chairman)  
GREENWOOD

HOLDEN (B.)  
HAMMOND  
KIRBY  
SHORROCK  
WORDEN

with the addition of

MISS K. HOWARD, MRS. M. WALSH, MRS. R. Y. AITKEN, MRS. M. BRADLEY,  
MRS. BOLTON, MRS. A. MATHERS SMETHURST and  
MRS. W. TATTERSALL, B.Sc.

## STAFF OF THE HEALTH DEPARTMENT :

Medical Officer of Health.

V. T. THIERENS, M.B., Ch.B., D.P.H.

Deputy Medical Officer of Health and Tuberculosis Officer.

G. C. F. ROE, L.R.C.P. & S.I., D.P.H., D.P.M. (left February, 1929).

I. M. McLACHLAN, M.D., B.S., B.Hy., D.P.H. (from April, 1929).

Assistant Medical Officers of Health.

C. B. HOGG, M.D., M.B., Ch.B., D.P.H. (left November, 1929).

MISS ELLA G. F. MACKENZIE, M.A., M.D., M.B., Ch.B. (Edin.), D.P.H. (Birm.).

Veterinary Inspector and Chief Meat Inspector.

E. J. BURNDRED, M.C., M.R.C.V.S., D.V.H.

\*JAMES GRAHAM, Chief Sanitary Inspector.

\*W. H. GOODMAN, Assistant Meat Inspector.

\*O. H. WILLIAMS, Special Inspector for Food and Drugs, etc.

\*H. KENYON, Special Inspector for Factories and Workshops.

District Inspectors.

\*J. W. MARGINSON.

\*W. WALNE.

\*H. W. FOWLER.

\*J. A. SHAW.

Lady Health Visitors.

§†\*Miss LOWE.      §\*Miss STANANOUGHT.      §††Miss BELL.      §††\*Miss RUDD.

§††Miss CATLOW.      §††Miss McLOUGHLIN.

††§Miss SUDWORTH.

Matron, Corporation Hospital—§††Miss CRITCHLEY.

Matron, Springfield Maternity Home—§††Miss BAMBRIDGE.

Tuberculosis Nurse—§†Miss FOSTER.

Chief Clerk—THOMAS FOWLER.

Clerks.

§H. WALSH.      \*J. R. MARSDEN.      Miss E. COMBERBACH.      §J. MARGINSON.  
Miss C. HAWORTH.      W. PARKER.      §R. HAYHURST.      C. AINSWORTH.

Disinfectors.

F. HOLDEN.      J. SLEVIN.

\*Holders of Certificates of the Royal Sanitary Institute.

†Certificated Midwives.

‡Trained Nurses.

§A contribution to the salaries of these Officers is made from Exchequer grants.



# CLINICS.

NAME.	PURPOSE.	WHERE HELD.	TIMES.
Inspection Clinic.	Special Examination of Cases Referred by Teachers, School Attendance Officers and School Nurses.	68, Victoria Street.	Wednesdays, 2 p.m. Saturdays, 9-30 a.m.
Ophthalmic Clinic.	Prescription of Spectacles.	68, Victoria Street.	Mondays, 1-30 p.m. Fridays, 1 30 p.m.
Dental Clinic.	Dental Treatment.	"	Every week day by appointment.
Minor Ailments Clinic.	Treatment of Minor Diseases of Skin, etc.	68, Victoria Street.	Every week day, at 8-45 a.m.
"	"	All Saints' School, Bolton Road.	Mondays to Fridays at 2-0 p.m.; Saturdays, 9-0 a.m.
Cleansing Station	Treatment of Scabies and Cleansing of Verminous Cases.	Throstle Street.	Tuesdays and Thursdays (by appointment).
Throat Clinic.	Operative Treatment of Adenoids and Enlarged Tonsils (Out-Patients).	Blackburn and East Lanes. R. Infirmary.	Arranged as required.
"	" (In-Patients).	Queen's Park Hospital.	Arranged as required.
Remedial Exercises.	Treatment of Deformities.	68, Victoria Street.	Every week-day (by appointment).
Tuberculosis Clinic.	Diagnosis and Treatment of Tuberculosis.	Dispensary, Duke Street.	Every week-day (except Wednesday), at 2 p.m. Tuesday, 7-0 p.m.
Orthopædic Clinic.	Supervision of Cripples, etc.	"	Third Friday in each month, at 4-0 p.m.
Maternity and Child Welfare Centres.	Child Welfare.	Princes Street P.M. School.	Monday, 2-0 p.m.
	"	Harwood St. School.	Tuesday, 2-0 p.m.
	"	Cornelian St. Institute.	Tuesday, 2-0 p.m.
	"	All Saints' Sch. Bolton Road.	Wednesday, 2-0 p.m.
	"	Harwood St. School.	Thursday, 2-0 p.m.
	"	Kendal St. School.	Thursday, 2-0 p.m.
	"	Griffin Parochial Hall	Friday, 2-0 p.m.
Ante-Natal Clinic.		66, Victoria Street.	Wednesday and Friday, at 10-0 a.m.
Special Ante-Natal Clinic.	(V.D.)	"	Tuesday, 10-0 a.m.
Strabismus Clinic.	Corroction of Squint in infants under school age.	"	By special appointment.
Venereal Diseases Clinics.	(V.D.)	Royal Infirmary.	Men : Tuesday, 5-30 p.m. Friday, 6-0 p.m. Women : Monday, 5-30 p.m. Thursday, 6 p.m.
Ultra-Violet Light Clinic.	Artificial Light Treatment.	Corporation Hospital.	Mondays, Tuesdays, Thursdays & Fridays, 2 p.m.
X-Ray Clinic.	X-Ray Examinations.	"	Saturday, 11-0 a.m., and by appointment.
Diphtheria Immunisation Clinic.	Prevention of Diphtheria.	68, Victoria Street.	Monday, 10-0 a.m. Monday, 4-30 p.m. Thursday, 10-0 a.m.



PUBLIC HEALTH OFFICE,

BLACKBURN,

March, 1930.

*To the Chairman and Members of the Health Committee of the County Borough  
of Blackburn.*

MR. CHAIRMAN, LADIES AND GENTLEMEN,

I beg to submit, in accordance with the Sanitary Officers Order 1922, my second Annual Report on the work of the Department during the year ended December 31st, 1929.

The Report, which has been compiled on the lines indicated by the Ministry of Health, follows the same arrangement as that for 1928.

The incidence of infectious disease has been unduly heavy during the year under review, particularly so as regards scarlet fever and diphtheria, the latter condition being of somewhat severe type, associated with a high mortality rate.

The birth-rate shows a fall, which, coupled with a comparatively high death-rate of 14·9, has led to a natural decrease of 2·5 per 1,000 of population.

My thanks are again due to all members of the Health Department Staff for the loyal and painstaking manner in which they have, without exception, discharged their duties throughout the year.

To you, Mr. Chairman, Ladies and Gentlemen, I wish to express my appreciation of the help and encouragement which you have accorded me.

I am,

Mr. Chairman, Ladies and Gentlemen,

Your obedient servant,

V. T. THIERENS.



*PART I.*

—

Vital Statistics  
*and*  
Social Conditions.

## VITAL STATISTICS.

	1929
Area (in Acres) ... ..	7,649
Population (Census, 1921) ... ..	126,643
„ (Estimated middle of 1929) ... ..	125,300
„ (Census, March, 1926) ... ..	126,497
Number of Inhabited Houses (1921) ... ..	30,948
„ „ „ (1929) ... ..	32,757
Number of Families or Separate Occupiers (1921) ... ..	31,608
Rateable Value ... ..	£759,649
Sum Represented by a Penny Rate ... ..	£2,903
Rate in the £ (excluding Water) 1928-9 ... ..	15'4*
Gross Expenditure on Health Social Services ... ..	£42,981
Income on Health Social Services ... ..	£19,887
Net Expenditure on Health Social Services ... ..	£23,094

*\*Subject to 5% discount for early payment, making  
a net rate of 14'6·8d.*

Live Births	(Legitimate ... 1490 ) M. 809	} Birth Rate ... 12·4
	(Illegitimate ... 64 ) F. 745	

Number of women dying in, or in consequence of, child-birth, from—

Sepsis ... ..	2 ... { 0·01 } per 1,000
Other Causes ... ..	13 ... { 0·10 } population

Deaths of infants under one year of age per 1,000 live births :—

Legitimate ... ..	79·8
Illegitimate ... ..	93·7
Deaths from Measles (all ages) ... ..	0·00
„ Whooping Cough (all ages) ... ..	0·06
„ Diarrhœa (under two years of age) ... ..	3·21
(Per 1,000 births).	

*Births* :—The births registered were 1,554, of which 64 were illegitimate. The total male births were 809, and female 745. The birth rate was 12·4 per 1,000, compared with 16·3 for England and Wales, and 16·6 for the 107 great towns.

TABLE 1.

<i>Year.</i>	<i>Birth Rate.</i>	<i>Death Rate.</i>	<i>Natural Increase</i> <i>1,000 Population.</i>
1904 . . . .	23·5	17·2	6·3
1914 . . . .	20·8	14·9	5·9
1920 . . . .	22·1	13·9	8·2
1921 . . . .	19·5	12·7	6·8
1922 . . . .	16·8	14·2	2·6
1923 . . . .	16·2	13·4	2·8
1924 . . . .	15·3	14·0	1·3
1925 . . . .	14·9	13·9	1·0
1926 . . . .	14·0	12·9	1·1
1927 . . . .	13·7	14·9	—1·3
1928 . . . .	13·8	12·2	1·5
1929 . . . .	12·4	14·9	—2·5

The death rate of Blackburn males was 15·3, and of females 14·5 per 1,000 living of each sex.

The birth rate of 12·4 per 1,000 is the lowest on record in Blackburn, whereas the death rate of 14·9 per 1,000 living is in excess of the corresponding figure (12·2) for 1928. The resultant natural decrease of population, which is 2·5 per 1,000 living, is a matter for disquietude, coupled as it is with the departure from the town (consequent on trade depression) of comparatively large numbers of the population.

*Marriages*.—There were 1,050 marriages solemnized during the year as follows : Established Churches, 491 ; other places of worship, 422 ; Register Office, 137.

TABLE 2.

WARD DEATH RATES IN RELATION TO PERSONS PER ACRE  
AND ROOM SPACE.

1921 CENSUS.

<i>Ward.</i>	<i>Death Rate.</i>	<i>Persons per Acre.</i>	<i>Rooms per Person.</i>
St. Stephen's .. .. .	17·8	9·5	1·08
Trinity .. .. .	14·1	59·1	1·05
St. Michael's .. .. .	14·7	14·4	1·10
St. John's .. .. .	11·8	71·1	1·13
St. Silas' .. .. .	15·1	9·1	1·50
St. Paul's .. .. .	15·7	79·5	1·12
St. Peter's .. .. .	16·2	50·5	1·05
St. Mary's .. .. .	18·1	31·8	1·02
St. Matthew's .. .. .	12·6	87·1	1·05
St. Thomas's .. .. .	15·7	7·0	1·28
Park .. .. .	15·7	14·6	1·08
St. Luke's .. .. .	15·2	45·1	1·03
St. Mark's .. .. .	10·9	25·9	1·13
St. Andrew's .. .. .	15·3	11·6	1·07

TABLE 3.

## DEATH RATES IN WARDS FOR THE PAST SIX YEARS.

<i>Ward.</i>	1924	1925	1926	1927	1928	1929	<i>Av. for 6 Years</i>
St. Stephen's ..	14·8	12·1	12·4	14·8	12·2	17·8	14·0
Trinity .. ..	14·8	14·2	11·8	18·1	13·2	14·1	14·4
St. Michael's ..	12·9	11·9	9·7	11·6	11·3	14·7	12·0
St. John's .. ..	14·3	13·0	12·4	13·4	12·3	11·8	12·9
St. Silas's .. ..	12·5	11·4	11·1	13·9	9·7	15·1	12·3
St. Paul's .. ..	15·9	15·2	14·1	13·3	14·2	15·7	14·7
St. Peter's .. ..	17·6	19·0	15·8	18·5	17·4	16·2	17·4
St. Mary's .. ..	18·4	21·5	22·6	21·1	14·6	18·1	19·7
St. Matthew's ..	15·6	13·1	12·1	13·8	9·8	12·6	12·8
St. Thomas's ..	11·3	13·6	12·3	14·2	10·8	15·7	13·0
Park .. .. .	14·6	13·8	13·6	11·7	13·1	15·7	13·7
St. Luke's .. ..	11·9	14·7	13·6	16·1	11·7	15·2	13·9
St. Mark's .. ..	9·3	11·6	10·8	14·6	11·7	10·9	11·5
St. Andrew's .. ..	14·8	14·3	13·4	17·4	11·7	15·3	14·5
Borough .. .. .	14·0	13·9	12·9	14·9	12·2	14·9	13·8

**TABLE 4.**  
VITAL STATISTICS DURING 1929.

WARDS	Popu- lation	Births	Deaths	Birth- Rate	Death- Rate	Deaths under one year per 1000 Births	Death- rate from six Zymotic Diseases excluding Diarrhoea	Death- rate from Diar- rhoea	Death- rate from Bron- chitis & Pneu- monia	Death-rate from Pulmonary Tuberculosis	Death-rate from Non-Pulmonary Tuberculosis
ST. STEPHEN'S ... ..	10906	191	195	17.5	17.8	62	0.1	0.0	4.4	1.1	0.1
TRINITY ... ..	8771	93	124	10.6	14.1	96	0.2	6.1	2.5	1.0	0.0
ST. MICHAEL'S ... ..	8883	92	131	10.3	14.7	108	0.4	0.1	2.8	1.4	0.1
ST. JOHN'S... ..	7117	80	84	11.2	11.8	99	0.0	0.0	2.3	0.8	0.0
ST. SILAS'S... ..	8921	63	135	7.0	15.1	63	0.4	0.1	1.3	0.7	0.1
ST. PAUL'S... ..	9660	127	152	13.1	15.7	110	0.3	0.1	2.7	0.6	0.3
ST. PETER'S ... ..	6640	103	108	15.5	16.2	116	0.3	0.1	4.6	1.2	0.3
ST. MARY'S ... ..	5463	87	99	15.9	18.1	126	0.3	0.0	5.0	1.1	0.0
ST. MATTHEW'S... ..	9222	102	117	11.0	12.6	39	0.1	0.0	3.8	0.9	0.0
ST. THOMAS'S ... ..	11941	126	188	10.5	15.7	103	0.2	0.08	3.3	1.0	0.08
PARK ... ..	9384	137	148	14.6	15.7	58	0.1	0.0	3.7	0.5	0.1
ST. LUKE'S ... ..	7492	113	114	15.0	15.2	44	0.2	0.0	3.0	1.3	0.0
ST. MARK'S ... ..	10313	98	113	9.5	10.9	71	0.0	0.09	2.1	0.5	0.0
ST. ANDREW'S ... ..	10587	142	163	13.4	15.3	56	0.1	0.09	2.5	0.6	0.1
BOROUGH ... ..	125300	1554	1871	12.4	14.9	80	0.2	0.06	3.1	0.9	0.1



TABLE 5.

VITAL STATISTICS OF WHOLE DISTRICT DURING 1929 AND PREVIOUS YEARS.

YEAR.	Population estimated to Middle of each Year.	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number	Nett.		Number	Rate	of Non-registered residents in the District.	of Residents not registered in the District.	Under 1 Year of Age.		At all Ages.	
			Number	Rate					Number	Rate per 1,000 Nett Births.	Number	Rate.
1	2	3	4	5	6	7	8	9	10	11	12	13
1919	125992	1835	1838	14.0	2106	16.7	161	63	174	94.6	2008	15.9
1920	127700	2835	2827	22.1	1891	14.8	157	52	311	110.0	1786	13.9
1921	129400	2538	2528	19.5	1753	13.5	157	59	276	109.1	1655	12.7
1922	129376	2207	2177	16.8	1983	15.3	190	50	215	98.7	1843	14.2
1923	129000	2121	2094	16.2	1878	14.5	191	49	210	100.2	1736	13.4
1924	129000	2013	1980	15.3	2013	15.4	250	47	167	84.3	1810	14.0
1925	126900	1948	1902	14.9	1973	15.5	251	45	186	97.7	1767	13.9
1926	124400	1802	1743	14.0	1795	14.4	240	61	156	89.5	1616	12.9
1927	124500	1764	1702	13.7	2128	17.0	327	63	131	77.0	1864	14.9
1928	125100	1803	1730	13.6	1758	14.0	275	52	139	80.3	1535	12.2
1929	125300	1637	1554	12.4	2102	16.7	305	74	125	80.4	1871	14.9

TABLE 6.

DEATHS REGISTERED DURING THE CALENDAR YEAR 1929 CLASSIFIED BY AGE AND CAUSE.

CAUSES OF DEATH.		Nett Deaths at the subjoined ages of "Residents," whether occurring within or without the District.											Total Deaths whether of "Residents" or "non-Residents" in Institutions in the District.
1		All Ages	Under 1 year.	1 and under 2 years.	2 and under 5 years.	5 and under 15 years.	15 and under 25 years.	25 and under 35 years.	35 and under 45 years.	45 and under 55 years.	55 and under 65 years.	65 years and upwards.	
		2	3	4	5	6	7	8	9	10	11	12	13
All Causes	Certified .....	1863	125	43	27	48	83	86	88	198	358	807	823
	Uncertified .....	8	..	..	..	..	..	..	..	1	2	5	..
Enteric Fever .....		..	..	..	..	..	..	..	..	..	..	..	..
Small Pox .....		..	..	..	..	..	..	..	..	..	..	..	..
Measles .....		..	..	..	..	..	..	..	..	..	..	..	..
Scarlet Fever .....		2	..	..	..	1	1	..	..	..	..	..	2
Whooping Cough .....		8	2	5	1	..	..	..	..	..	..	..	2
Diphtheria and Croup .....		18	..	..	4	13	..	..	..	..	1	..	17
Influenza .....		65	..	..	..	2	1	6	4	6	16	30	4
Erysipelas .....		3	..	..	..	..	..	..	..	..	1	2	3
Tetanus .....		..	..	..	..	..	..	..	..	..	..	..	..
Pulmonary Tuberculosis .....		114	..	1	2	2	31	24	15	19	16	4	53
Tuberculous Meningitis .....		4	1	1	..	..	2	..	..	..	..	..	4
Other Tuberculous Diseases .....		9	1	1	..	..	4	1	..	1	1	..	5
Cancer, Malignant Disease .....		192	..	..	..	..	..	4	4	35	69	80	86
Acute Rheumatism and Rheumatic Fever .....		2	..	..	..	..	1	..	..	..	..	1	4
Cerebro-Spinal Meningitis .....		..	..	..	..	..	..	..	..	..	..	..	..
Encephalitis Lethargica .....		2	..	..	1	..	..	1	..	..	..	..	2
Other Forms of Meningitis (not T.B.) .....		18	3	2	1	1	2	2	..	2	3	2	13
Poliomyelitis .....		..	..	..	..	..	..	..	..	..	..	..	..
Locomotor Ataxy .....		3	..	..	..	..	..	..	..	1	2	..	..
General Paralysis of the Insane .....		4	..	..	..	..	..	..	2	1	1	..	1
Cerebral Hæmorrhage .....		116	..	..	..	..	..	..	3	10	28	75	30
Other Diseases of the Nervous Sys'm .....		69	8	3	2	..	1	2	5	5	13	30	32
Senile Decay .....		75	..	..	..	..	..	..	..	..	1	74	44
Organic Heart Disease .....		315	..	..	1	4	7	7	12	34	70	180	120
Arterio-Sclerosis .....		26	..	..	..	..	..	..	..	..	4	22	4
Aneurism .....		..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Circulatory System .....		11	..	..	..	..	..	..	1	..	1	9	1
Bronchitis, Acute .....		130	11	..	2	..	2	..	3	7	22	83	28
Bronchitis, Chronic .....		60	2	..	..	..	..	1	3	8	18	28	18
Influenzal Broncho Pneumonia .....		30	..	..	1	..	2	2	2	5	7	11	9
Pneumonia (other forms) .....		171	24	23	5	3	3	8	8	19	25	53	55
Other Diseases of the Respiratory System .....		29	..	..	..	..	1	1	1	4	8	14	11
Diarrhœa and Enteritis .....		8	4	1	2	..	1	..	..	..	..	..	5
Appendicitis, Typhlitis and Peritonitis .....		21	..	..	1	3	3	4	2	3	5	..	24
Cirrhosis of the Liver .....		4	..	..	..	..	..	..	..	1	..	3	..
Alcoholism .....		..	..	..	..	..	..	..	..	..	..	..	..
Other Diseases of the Digestive Sys'm .....		25	1	1	..	..	..	2	..	5	3	13	23
Nephritis and Bright's Disease .....		66	..	1	..	1	3	3	8	11	14	25	25
Other Diseases of the Urinary Sys'm .....		34	..	..	..	..	..	..	2	3	8	21	32
Puerperal Fever .....		2	..	..	..	..	..	2	..	..	..	..	3
Puerperal Pyrexia .....		1	..	..	..	..	..	1	..	..	..	..	2
Other Diseases and Accidents of Pregnancy and Parturition .....		12	..	..	..	..	3	5	4	..	..	..	10
Congenital Debility and Malforma'n .....		25	25	..	..	..	..	..	..	..	..	..	18
Premature Birth .....		32	32	..	..	..	..	..	..	..	..	..	7
Venereal Diseases .....		3	1	1	..	..	..	..	1	..	..	..	..
Other Diseases of the Reproductive System (Non-Malignant) .....		6	..	..	..	..	..	..	..	..	..	6	6
Violent Deaths (excluding Suicide) .....		72	3	3	2	14	10	6	2	7	4	21	85
Suicide .....		17	..	..	..	..	1	3	3	1	6	3	1
All other Defined Diseases .....		61	7	..	2	4	4	1	3	11	13	16	34
Diseases Ill-defined or unknown .....		6	..	..	..	..	..	..	..	..	..	6	..
All Causes .....		1871	125	43	27	48	83	86	88	199	360	812	823

TABLE 7.

## CLASSIFICATION OF DEATHS ACCORDING TO DISEASE.

CAUSE OF DEATH.	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	
	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Total Deaths	Death Rate.
Enteric Fever .....	1	..	..	..	1	..	1	2	1	..	..	0.00
Smallpox .....	..	..	..	..	..	..	..	..	..	..	..	0.00
Measles .....	..	18	3	32	6	20	28	3	36	..	..	0.00
Scarlet Fever.....	2	3	1	2	..	1	3	1	1	..	2	0.01
Whooping Cough .....	11	1	20	9	7	7	16	20	1	4	8	0.06
Diphtheria and Croup ....	3	10	6	7	1	3	8	8	11	14	18	0.14
Influenza .....	187	59	20	72	49	69	34	23	74	19	65	0.52
Erysipelas .....	1	..	2	1	2	1	..	1	7	..	3	0.02
Phthisis (Pulmonary Tuberculosis) .....	116	82	77	96	93	85	90	106	96	82	114	0.90
Tuberculous Meningitis ....	10	14	5	10	4	4	9	2	2	7	4	0.03
Other Tuberculous Diseases..	17	15	19	16	27	22	11	8	12	14	9	0.07
Cancer, Malignant Disease ..	165	172	175	163	177	184	160	166	160	163	192	1.53
Rheumatic Fever .....	2	..	2	..	..	..	2	..	5	2	2	0.01
Meningitis .....	5	17	13	15	10	11	18	9	5	14	18	0.14
Organic Heart Disease.....	269	215	214	221	166	204	211	198	269	334	315	2.51
Bronchitis .....	269	231	163	224	209	238	194	192	221	119	190	1.51
Pneumonia (all forms).....	210	178	133	173	189	199	176	112	175	152	201	1.60
Other Diseases of Respiratory Organs .....	16	16	19	29	22	21	15	20	27	25	29	0.23
Diarrhoea and Enteritis ....	26	45	47	26	24	15	12	15	24	8	8	0.06
Appendicitis and Typhlitis..	9	12	11	8	9	4	10	13	12	19	21	0.17
Cirrhosis of Liver .....	3	3	11	5	10	5	5	2	3	1	4	0.03
Alcoholism .....	..	3	1	..	..	..	..	1	1	..	..	0.00
Nephritis & Bright's Disease.	51	52	56	39	53	51	44	59	40	31	66	0.52
Puerperal Fever .....	5	3	6	1	5	3	4	7	3	1	2	0.01
Other Accidents and Diseases of Pregnancy and Parturition .....	6	13	5	14	9	7	7	7	10	6	13	0.10
Congenital Debility and Malformation, including Premature Birth.....	84	130	104	98	100	59	68	76	66	71	57	0.45
Violent Deaths, excluding Suicide .....	40	48	46	43	36	49	46	52	60	50	72	0.57
Suicide .....	8	12	17	20	22	21	20	16	27	20	17	0.13
Other Defined Diseases ....	428	407	470	511	500	526	567	494	514	372	435	3.47
Diseases ill-defined or unknown .....	64	27	9	8	5	2	8	3	1	7	6	0.05
TOTAL.....	2008	1786	1655	1843	1736	1810	1767	1616	1864	1535	1871	14.93

*Deaths* :—The total number of deaths registered was 1,871, of which 877 were males and 994 were females. The death rate was 14·9 per 1,000, compared with 13·4 for England and Wales and 13·7 for the 107 great towns.

### CAUSES OF DEATH AND SICKNESS.

During 1929 the chief causes of death were as under :—

<i>Disease.</i>	<i>No. of Deaths.</i>		<i>Deaths per 1,000.</i>	
Organic Heart Disease ... ..	315	(334)	2·51	(2·67)
Pneumonia ... ..	201	(152)	1·60	(1·21)
Cancer ... ..	192	(163)	1·53	(1·30)
Bronchitis ... ..	190	(119)	1·51	(0·95)
Pulmonary Tuberculosis ... ..	114	(82)	0·90	(0·65)

*The bracketed figures represent the corresponding number for 1928.*

Diseases of bodily systems and group diseases to which death was assigned are as follows :—

<i>Disease.</i>	<i>No. of Deaths.</i>		<i>Deaths per 1,000.</i>	
Respiratory System (Non-Tubercular) ...	420	(296)	3·35	(2·36)
Circulatory System (Non-Tubercular) ...	352	(368)	2·80	(2·94)
Nervous System (Non-Tubercular) ... ..	212	(175)	1·69	(1·39)
Cancer ... ..	192	(163)	1·53	(1·30)
Tuberculosis (all forms) ... ..	127	(103)	1·01	(0·82)
Renal System (Non-Tubercular) ... ..	100	(57)	0·79	(0·45)
Infectious Diseases ... ..	96	(37)	0·76	(0·29)
Digestive Diseases ... ..	58	(57)	0·46	(0·45)
Diseases of Babyhood (under one year) ...	57	(71)	0·45	(0·56)
Diseases associated with Maternity ... ..	15	(7)	0·12	(0·05)

*The bracketed figures represent the corresponding number for 1928.*

In the above table it will be noted that the most marked increases in the causes of death occur in the non-tubercular respiratory and infectious diseases groups. The increase in the former group was due to pneumonia, associated with an outbreak of influenza in the early months of the year, which accounted for a large number of deaths. In fact, the deaths from all forms of pneumonia (201) is the highest recorded since 1919.

In the Infectious Diseases Group Influenza was responsible for 65 deaths, and diphtheria, which has been unduly prevalent, took toll of 18 lives. The question of diphtheria and its prevention is dealt with in a later section of this Report.



Further perusal of these Tables shows that the total number of deaths ascribed to respiratory disease was 420, which corresponds to a death rate of 3·35 per 1,000 living.

As in 1928, organic heart disease was the greatest single cause of death, the death rate from this cause being considerably higher than in previous years. Other diseases of the circulatory system, not being organic heart disease, accounted for a further 37 deaths. For previous years the number of deaths from organic heart disease have been as under —

<i>Year.</i>	1928	1927	1926	1925	1924	1923	1922
Number of Deaths ... ..	315	269	198	211	204	166	221

The deaths from Cancer numbered 192, as compared with 163 in 1928 ; 160 in 1927 ; 166 in 1926 ; 166 in 1925 ; 184 in 1924 ; 177 in 1923 ; and 163 in 1922. There has been, therefore, no apparent definite increase in deaths from this cause during the past five years.

The Death Rates from Cancer per 1,000 of the population for the past 12 years are as under :—

1918	...	...	1·17	1924	...	...	1·42
1919	...	...	1·30	1925	...	...	1·26
1920	...	...	1·22	1926	...	...	1·33
1921	...	...	1·36	1927	...	...	1·28
1922	...	...	1·26	1928	...	..	1·30
1923	...	...	1·37	1929	...	...	1·53

**TABLE 8.**

**DEATHS FROM CANCER OCCURRED AT THE FOLLOWING AGES :**

<i>Age Period.</i>	<i>Male.</i>	<i>Female</i>	<i>Total</i>	<i>No. of popu- lation at this age period.</i>	<i>Number of deaths per 1,000 persons living.</i>
Under 25 years .. ..	..	..	..	41323	0·00
25 and under 35 years .. ..	2	2	4	31210	0·12
35     ,,     45 years .. ..	..	4	4	19681	0·20
45     ,,     65 years .. ..	43	61	104	26321	3·95
65 years and over .. ..	38	42	80	6765	11·82
	83	109	192	125300	1·53

**TABLE 9.**  
**SITES OF FATAL CANCER.**

<i>Site.</i>	<i>Male.</i>	<i>Female.</i>	<i>Total.</i>
Skin .. .. .	—	1	1
Tongue and Mouth .. .	10	2	12
Kidney .. .	—	1	1
Oesophagus .. .	5	1	6
Stomach .. .	26	22	48
Liver .. .	9	11	20
Bowel and Abdominal ..	15	20	35
Rectum .. .	3	3	6
Bladder .. .	1	—	1
Prostate .. .	4	—	4
Larynx .. .	3	—	3
Uterus .. .	—	24	24
Breast .. .	—	14	14
Ovary .. .	—	3	3
Pancreas .. .	3	1	4
Spleen .. .	—	1	1
Gall Bladder .. .	—	2	2
Bones .. .	2	1	3
Lung .. .	—	2	2
Male Genital Organs ..	2	—	2
<b>TOTAL .. .</b>	<b>83</b>	<b>109</b>	<b>192</b>

In Table 8 it will be noted that the number of deaths from Cancer per 1,000 living is higher in the older than in the younger age groups. The most rapid rate of increase takes place in the age group 65 and over, in which group the rate is 7·87 per 1,000 higher than in the 45-65 age group.

#### MORTALITY STATISTICS IN COTTON OPERATIVES.

The subjoined Tables are a continuation of those given in previous reports.

TABLE 10.

## RESPIRATORY DISEASES (NON-TUBERCULAR).

DEATH-RATES PER 1,000 EMPLOYEES (1921 CENSUS).

## DEATHS.

## DEATH RATES.

Age Period.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.						M.	F.					
Years														
15-25..	2	..	..	..	..	2	8	0.9	..	..	..	..	1.5	0.3
25-35..	2	1	..	..	..	..	12	1.5	0.2	..	..	..	..	0.5
35-45..	..	2	1	..	..	3	17	..	0.6	2.7	..	..	4.4	0.8
45-55..	2	2	1	2	..	4	43	2.0	1.1	4.4	3.9	..	9.7	2.6
55-65..	3	..	1	2	1	4	80	4.5	..	8.5	7.6	11.6	18.6	7.5
65 and upwards..	14	4	8	2	1	7	189	69.6	32.2	275.9	30.7	47.6	129.6	27.5
TOTAL ..	23	9	11	6	2	20	349	3.6	0.5	5.6	1.3	1.4	5.5	3.6

## PULMONARY TUBERCULOSIS.

15-25..	1	9	2	2	..	4	31	0.4	1.2	2.7	1.2	..	3.0	1.4
25-35..	..	6	2	4	..	1	24	..	1.2	4.0	3.6	..	1.1	1.1
35-45..	2	2	1	..	..	..	15	1.7	0.5	2.7	..	..	..	0.7
45-55..	..	3	2	..	..	..	19	..	1.7	9.0	..	..	4.8	1.1
55-65..	1	..	1	1	1	1	16	1.5	..	8.5	3.8	11.6	4.6	1.5
65 and upwards..	1	..	1	..	..	1	4	4.9	..	34.5	..	..	18.5	0.5
TOTAL ..	5	20	9	7	1	9	109	0.8	1.1	4.6	1.4	0.7	2.5	1.1



TABLE 10—Continued.

NON-PULMONARY TUBERCULOSIS.

DEATHS.

DEATH RATES.

Age Period.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.	Weavers.		Spinners.	Winders, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.						M.	F.					
Years														
15—25..	..	1	..	..	..	2	6	..	0.1	..	..	..	1.5	0.2
25—35..	..	..	..	..	..	..	1	..	..	..	..	..	..	0.04
35—45..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
45—55..	..	..	..	..	..	..	1	..	..	..	..	..	..	0.06
55—65..	..	..	..	..	..	..	1	..	..	..	..	..	..	0.09
65 and upwards..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
TOTAL ..	..	1	..	..	..	2	9	..	0.05	..	..	..	0.5	0.09

ALL OTHER DISEASES.

15—25..	4	5	1	9	2	6	38	1.9	0.7	1.3	5.5	3.7	4.5	1.7
25—35..	4	8	2	2	..	1	49	3.1	1.6	4.0	1.8	..	1.1	2.3
35—45..	2	9	1	4	..	4	56	1.7	2.6	2.7	4.8	..	5.9	2.8
45—55..	8	11	1	1	2	9	136	8.0	6.4	4.4	1.9	12.2	21.8	8.4
55—65..	17	10	1	6	2	19	263	25.7	14.7	8.5	22.9	23.2	88.3	24.7
65 and upwards..	34	21	16	6	8	34	619	169.1	169.3	551.7	92.3	380.9	629.6	90.1
TOTAL ..	69	64	22	28	14	73	1161	10.9	3.6	11.2	6.4	9.8	20.3	12.0
GRAND TOTAL..	97	94	42	41	17	104	1628	15.4	5.3	21.5	9.4	11.9	29.0	16.9

**TABLE 11.**  
**POPULATIONS, 1921 CENSUS.**

Age Period.	Weavers.		Spinners.	Winders, Warpers, etc.	Card Room Hands.	Other Cotton Operatives.	Borough.
	M.	F.					
Years							
15—25.. .. .	2019	7009	723	1616	530	1329	21946
25—35.. .. .	1258	4892	490	1094	359	899	20876
35—45.. .. .	1151	3380	367	819	269	674	19878
45—55.. .. .	1000	1707	224	501	164	412	16052
55—65.. .. .	660	676	117	261	86	215	10647
65 and upwards.. .	201	124	29	65	21	54	6866
<b>TOTAL</b> .. .. .	<b>6289</b>	<b>17788</b>	<b>1950</b>	<b>4356</b>	<b>1429</b>	<b>3583</b>	<b>96265</b>

### SOCIAL CONDITIONS.

The chief industry in Blackburn is Cotton Weaving and allied processes.

The year under review has been one of great industrial depression, with consequent unemployment.

### POOR-LAW RELIEF.

#### BLACKBURN UNION.

I am indebted to Mr. G. B. Pye, the Clerk to the Guardians, for the following particulars :—

Number of Residents in the Blackburn Township in receipt of Out-door Relief on the

1st January, 1929	... 1499 families, comprising 3207 persons.
1st July, 1929	... 1260 families, comprising 2605 persons.
1st January, 1930	... 1385 families, comprising 2903 persons.

Number of persons relieved in the Guardians' Institution on the

1st January, 1930	... .. .	798
And in the Cottage Homes on the same day	... .. .	74

Expenditure on Out-Relief to Blackburn Persons during the Twelve months ending the 30th September, 1929 :—

Half-year ended 31st March, 1929	... .. .	£22,397 8 0
Half-year ended 30th September, 1929	... .. .	£20,886 5 3

Number of Blackburn Township Cases in the Queen's Park Hospital at the end of 1929... .. . 316

*(This number is included in the 798 mentioned above).*

## HOSPITAL ACCOMMODATION.

(1.) *Infectious Diseases* :—

The Corporation Hospital, in Longshaw Lane, has accommodation for 56 fever patients. In time of great prevalence of infectious disease, closure of the Open-Air School Block would provide 30 additional beds for Fever cases, bringing the Fever bed accommodation to 86.

The Finnington Hospital, which is situated three miles outside the Borough, has beds for the reception of 60 Small-Pox cases.

(2.) *Tuberculosis* :—

Thirty-four beds, for the reception of Tuberculous cases, are available at the Corporation Hospital.

Ten beds for the reception of early cases of Tuberculosis are retained by the Corporation at Meathop Sanatorium, Grange-over-Sands.

(3.) *Maternity* :—

The Municipal Maternity Home, Preston New Road, has accommodation for 20 cases.

(4.) *Children* :—

There is no Children's Hospital in the Borough. Cases of Tuberculosis in children are received either into the Sanatorium block or into the Residential Open-Air School at the Corporation Hospital.

By arrangement with the Guardians, accommodation is available at Queen's Park Hospital, for the treatment of delicate and crippled children.

Forty beds are available at the Royal Infirmary for children under the age of 14.

(5.) *Orthopædics* :—

There is no special Orthopædic Hospital in Blackburn.

Orthopædic cases are received into the Blackburn and East Lancashire Royal Infirmary and the Queen's Park Hospital.

(6.) *The Blackburn and East Lancashire Royal Infirmary :—*

The opening of the War Memorial Wing in August, 1928, increased the accommodation from 152 to 238 beds. The beds are allocated as follows :—

Males...	...	...	...	...	90
Females	...	...	...	...	108
Under fourteen	...	...	...	...	40

I am indebted to the General Superintendent and Secretary for this information.

(7.) *Queen's Park Hospital (Blackburn Union) :—*

I wish to thank Mr. G. B. Pye, Clerk to the Guardians, for the following particulars :—

Total Number of Beds at the Guardians' Institution and Cottage					
Homes on the 1st January, 1930	...	...	...	...	1388
Total Number of Inmates on the same day	...	...	...	...	1172
Total Number of such Inmates who were suffering from Sickness, accident, or bodily or mental infirmity, including aged and infirm persons requiring regular nursing care or treatment					
	...	...	...	...	1045
Total Number of Sick Children on the 1st January, 1929	...	...	...	...	131
Admitted during 1929	...	...	...	...	437
Discharged or Died...	...	...	...	...	444
Number remaining on the 1st January, 1930	...	...	...	...	124

An extension opened at Queen's Park Hospital in October, 1929, provided 70 extra beds.

## AMBULANCE FACILITIES.

(1.) *For Infectious Cases :*

The Local Authority provide Three Motor Ambulances.

(2.) *For Non-Infectious Cases :*

Two Motor Ambulances are available, one of which is provided by the Watch Committee, and the other by the Joint Committee of the British Red Cross Society and the St. John's Ambulance Brigade.

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*PART II.*

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Sanitary Circumstances.

## SANITARY CIRCUMSTANCES OF BLACKBURN.

### *Water Supply.*

The Blackburn Water Supply is an upland surface water and has been found satisfactory during the year.

The average daily consumption of water has been 4,028,680 gallons, an average of 28.37 gallons per head.

Samples have been taken at intervals during the year and the following are the latest reports :—

#### (I.) *Chemical Examination :*

Colour :	Brown.	Turbidity :	Nil.	Smell :	Slight		
Oxygen absorbed at 27° in four hours in acid solution	..	..	..	..	..	0.282	
Free and Saline Ammonia	..	..	..	..	As NH <sub>3</sub>	0.0056	
Albuminoid Ammonia	..	..	..	..	..	0.0116	
Nitrous Nitrogen	..	..	..	..	..	Nil.	
Nitric Nitrogen	..	..	..	..	..	0.010	
Chlorides	..	..	..	..	As Cl	1.0	
Phosphates	..	..	..	..	As H <sub>3</sub> PO <sub>4</sub>	Nil.	
Hardness—Temporary	..	..	..	..	As CaCO <sub>3</sub>	0.25	
Permanent	..	..	..	..	..	2.85	
Total	..	..	..	..	..	3.1	
Reaction :	Lacmoid, Acid. Methyl Orange, Neutral. Phenolphthalein, Acid.						
Action on bright lead foil in 24 hours	..	..	..	..	..	0.25	
All the numerical results are expressed in parts per 100,000.							

#### (II.) *Bacteriological Examination :*

<i>Quantitative Analysis.</i>				<i>Average Results of Two Examinations.</i>			
(a)	Ærobie micro-organisms growing in three days in nutrient gelatine at 20° C. to 21°C.			No. of colonies in one gramme (15.43 grains) of water.			
	Non-liquefying bacteria	..	..	..	139	} Total	158
	Liquefying bacteria..	..	..	..	19		

<i>Qualitative Analysis.</i>		<i>Quantity of water in which these bacteria were</i>	
		<i>found</i>	<i>not found</i>
(a)	Bacteria associated with sewage or faecal pollution .. <i>Bacillus coli communis</i> ..	10 cc.	1 cc.

### *Housing.*

During the year 194 houses have been built by the Corporation and 84 by private enterprise. At the end of the year 194 Corporation Houses and 86 private enterprise houses (none of which were State aided) were in the course of erection.



*Housing—(continued).*

Number of Houses demolished under the Town's Improvement Clauses Act, 1847	...	...	...	...	...	...	<i>Nil.</i>
Any action taken in respect of Temporary buildings	...	...	...	...	...	...	<i>None.</i>

No. of Houses completed and occupied during 1929, including  
those :—

(a) Built by the Corporation	...	...	...	...	194
(b) Built by Private Enterprise	...	...	...	...	84
(c) Number of Houses under latter heading towards which a State subsidy was paid	...	...	...	...	<i>Nil.</i>
(d) Number of houses at the end of 1929 in course of erection (1) by the Corporation; (2) by private builders, and the number of these which are State- aided :—					
(1) Corporation; Contracts let for the erection of 194 houses.					
(2) 86 (none State-aided).					
(e) Number of Houses completed and occupied on the various housing estates of the Council, together with the number under each Ministry of Health type, <i>e.g.</i> , parlour type, etc.					

Type.	Green Lane.	Brownhill.	Roe Lee.	Intack.	Whitebirk.
B. 3 Par., 3 Bed. ... ..	104	96	—	26	—
A. 3 Non-Par., 3 Bed. ... ..	32	134	54	41	42
A. 2 Non-Par., 2 Bed. ... ..	—	44	40	62	18
A. 2 Flats ... ..	—	28	—	28	—
	—	—	—	—	—
	136	302	94	157	60
	—	—	—	—	—

Type.	Whitebirk New.	Hollin Bdge St.	Hollin St.
B. 3 Par., 3 Bed.... ..	—	—	—
A. 3 Non-Par., 3 Bed. ... ..	94	—	34
A. 2 Non-Par., 2 Bed. ... ..	46	16	20
A. 2 Flats ... ..	—	—	—
	—	—	—
	140	16	54
	—	—	—



(f) The Rents of the various Corporation Houses are as follows :—

Parlour, 3 Beds. ...	...	...	...	11/6 and 11/- per week.
Non-Parlour, 3 Beds. ...	11/-, 10/6, 10/3, 9/9, 9/3, 9/-, and 8 9.			
Non-Par., 2 Beds. ...	...	...	...	8/3, 8/-, 7/9, 7/6.
Flats ...	...	...	...	6/6.

(Tenant pays rates in addition).

Inclusive of Rates : Non-Parlour 3 Bed. 13/10 per week.  
Non-Parlour 2 Bed. 11/11 per week.

(g) No. of Applicants for Corporation Houses on the waiting list at the end of 1929 :—

33 for Parlour 3-Bed. Type.

60 for Non-Parlour 3-Bed. Type (large).

188 for Non-Parlour 3-Bed. Type (small).

472 for Non-Parlour 2-Bed. Type.

---

Total ... 753

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The total number of houses completed and occupied on the various housing sites of the Council was, at the end of the year, 959.

Compared with many of the East Lancashire industrial towns the conditions under which the majority of Blackburn residents are housed must be considered satisfactory. It can be stated that Blackburn possesses no well-defined slum areas, although a few areas still remain where isolated groups of property are unsatisfactory, either as regards structure, state of repair, general surroundings, or a combination of these defects.

*Sanitary Accommodation and Scavenging :*

I am indebted to the Borough Engineer for the subjoined particulars of work done during 1929 :—

*(I.) Sanitary Accommodation :*

Privies .. .. .	14
Pail Closets .. .. .	120
Slop Water Closets .. .. .	2223
Fresh Water Closets .. .. .	37821
	<hr/>
	40178
	<hr/>

*Conversions :*

Pail Closets by Owners .. .. .	2
Pail Closets by Corporation .. .. .	3
Wet Pits by Owners .. .. .	0
Tipplers by Owners .. .. .	54
Tipplers by Corporation .. .. .	3

*(II.) New Sewers :*

.. .. .	12-in sewer ..	30 yards
.. .. .	9-in. sewer ..	1541 yards
.. .. .	6-in. sewer ..	11417 yards.

*(III.) Lavatory and Urinal Accommodation :*

This is the same as last year.

*(IV.) Collection of Refuse :*

	<i>Loads</i>	<i>Tons</i>	<i>Cwt.</i>	<i>Qrs.</i>
House Refuse .. .. .	15704	24972	12	0
Market Refuse .. .. .	792	929	13	2
Midden Refuse .. .. .	34	51	13	0
Shop and Trade Refuse .. .. .	842	826	9	0

*(V.) Ashpit and Ashtub Conversions :*

No. of Ashtubs Abolished .. .. .	1
No. of Bins substituted in lieu of same .. .. .	1
No. of Ashpits Abolished .. .. .	31
No. of Bins substituted in lieu of same .. .. .	38

*Approximate :—*

No. of Ashbins in use .. .. .	33027
No. of Ashtubs in use .. .. .	0
No. of Dry Ashpits in use .. .. .	19
No. of Wet Ashpits in use .. .. .	12
No. of Excreta Pails in use .. .. .	128
No. of Tanks in use .. .. .	15

### *Houses Let in Lodgings.*

The register contains particulars of 84 houses let in lodgings, with a total of 405 rooms which provide accommodation for approximately 1,000 individuals.

Weekly inspections continue to be made, as frequent visits are necessary to secure a reasonable degree of cleanliness and sanitation of the premises.

In my Report for 1928 I referred to the high rents charged for accommodation. During the year under review a detailed census of all houses let in lodgings revealed the fact that the weekly rentals varied from 3/6 to 13/- per room, and that the average weekly rental per room was 7/1½.

Notwithstanding the high rents charged the accommodation provided is poor in the extreme. The furniture is meagre and dilapidated, in the majority of houses there are no bathing facilities, and the cooking and sanitary arrangements are inadequate for the needs of the families housed.

The census of these establishments clearly established that the profits accruing from the business were such that the proprietors could well afford to bring the accommodation up to a standard more proportionate to the rentals demanded. In view of this fact a vigorous policy has been adopted with respect to the house-let-in-lodgings, and a strict enforcement of the bye-laws is securing a much-needed improvement in the accommodation offered.

Whilst dealing with the question of the house-let-in-lodgings I would direct your attention to the need of legal powers to limit the extortionate rentals charged, which in many cases exceed those required for a Corporation or private house.

### COMMON LODGING HOUSES.

There are 14 Common Lodging Houses in the Borough, which provide accommodation for 667 persons.

In all these houses the domestic conveniences are of a much higher standard than those provided at the majority of houses let-in-lodgings. Facilities for the storing and preparation of food, for personal ablution, etc., are in most cases satisfactory.

A useful provision for the further control of common lodging houses has been obtained in Section 82 of the Blackburn Corporation Act, 1929. This section provides as follows :—

“ No house or part of a house shall be exempt from the provisions with respect to common lodging-houses of the Public Health Acts or any local Act relating to the Corporation or any bye-laws made thereunder on the ground that accommodation in such house or part of a house is let for a longer period or longer periods than one day or is not let for a less period than one week.”

A case illustrative of the need for this clause was heard before the Blackburn Bench in January, 1925.

A Blackburn person was summoned at the instance of the then Medical Officer of Health for unlawfully receiving on the 28th day of January, 1925, lodgers in an unregistered house. The defendant was occupier and owner of the premises, and on the day in question he had as lodgers six women, all of the poorer class, most of them pensioners. The lodgers used one common room for their meals, and lived together in that room. There were three bedrooms, two of which were used by the lodgers, one room containing three beds and the other five beds. The lodgers found their own food and paid five shillings per week in cash for their accommodation, these sums being paid weekly. They had been lodging there continuously for over three months. The Medical Officer of Health, when he visited the house found no difference in management between this house and any other common lodging-house.

On these facts the prosecution contended that the house was a common lodging-house registerable under Section 76 of the Public Health Act, 1875. The Bench dismissed the summons as they held that a common lodging-house was “ a house in which persons are harboured or lodged for hire for a single night, or for less than a week at any time, or any part of which is let for any time less than a week.” This judgment was upheld by the High Court of Justice, King’s Bench Division.

#### *Tents, Sheds, Caravans, etc.*

At the end of the year there were 43 caravans in the Borough used as human habitations.

Constant sanitary survey is necessary if the caravans and their surroundings are to be kept in a cleanly and sanitary state. The majority of caravans are on land without proper drainage, water or other sanitary facilities, the dwellers relying on near-by houses for their water supply and sanitary accommodation.

During the year 297 visits were paid to this class of dwelling.

The general cleanliness of the travelling vans which came to Blackburn during the Easter holidays was satisfactory.

*Underground Sleeping Rooms.*—*Housing Act, 1925, Section 18 (1).*

There are no underground sleeping rooms in the district.

*Canal Boats Acts, 1877 and 1884.*

One hundred and fifty-one boats were inspected during the year. There are 87 boats on the register, four of which have not been traced. One boat has been re-registered, owing to a change of owner, and one new boat has been registered.

Two infringements of the Acts have been detected as follows :—

One master without certificate. No cover for water cask. Two statutory notices have been served notifying the owners of the infringements, and the necessary corrections have been made. No case of infectious disease occurred, and there has been no detention of boats for cleansing or disinfection.

### *Offensive Trades.*

The number of offensive trades within the Borough is 29, of which 17 are bone, and rag and bone dealing, four are fat extraction or fat rendering, two are gut-scraping, four are tripe-boiling, and two knackering.

Nuisances arising in connection with offensive trades are influenced by the amount of care exercised in the storage of the raw material and waste products. Careless methods of storage and production have been responsible for the majority of nuisances reported, and attention paid to these details has resulted generally in abatement of the nuisance complained of.



*Nuisances :*

Table 12 contains a statement of the number of the various nuisances discovered during the year, and Table 13 shows the sanitary improvements made and defects remedied under the supervision of the Sanitary Inspectors.

**TABLE 12.****INSPECTION WORK.**

	1928	1929
No. of Complaints by Inhabitants .. .. .	343	324
No. of Complaints referred from other Departments ..	63	71
No. of Special Inspections for suspected nuisances ..	28	36

*No. of Nuisances Discovered as Result of :—*

Complaints by Inhabitants .. .. .	741	725
Visiting Cases of Infectious Diseases .. ..	194	259
Special Inspections .. .. .	151	20
Complaints from other Departments .. ..	75	91
Notifications of H.M. Inspector of Factories ..	70	10
Routine Inspection Visits .. .. .	2441	2654
Housing and Town Planning Inspections .. ..	1343	1251
Total number of Defects found .. .. .	5301	5231
Total number of Defects remedied .. .. .	5431	4356
No. of Informal Notices Served .. .. .	1658	1537
No. of Formal Notices Served .. .. .	262	276
No. of Informal Notices complied with .. ..	1299	1162
No. of Formal Notices complied with .. ..	203	212
No. of Interviews .. .. .	521	350
No. of Letters sent out .. .. .	99	85

Sanitary improvements made and defects remedied under the supervision of the Sanitary Inspectors :—

TABLE 13.

## DWELLING HOUSES.

Water supply improved .....	1
Cleansed and limewashed.....	56
Overcrowding abated .....	4
Damp and defective house, walls, roofs, etc.....	426
Defective gutters and down- spouts.....	488
Cleansing dirty floors .....	23
"    "    woodwork .....	—
"    "    dirty yards.....	82
"    "    bedding .....	5
"    "    windows .....	—
"    "    gully traps .....	23
"    "    cellar areas.....	—
Obstructive buildings removed ..	1
Defective sink waste pipes .....	88
Defective dishstones.....	73
Waste pipes disconnected from drain .....	2
Yards and passages reflagged ....	1
Flooding of houses .....	—
Yards badly paved or flagged....	61
Insufficient ventilation of rooms..	1
Defective chimney flues .....	29
Window sash frames, cords, internal walls, ceilings, floors, stairs, fireplaces, doors, cup- boards to be repaired.....	763
Dangerous and defective chim- ney stacks .....	137
Fractured internal walls .....	6
Gas pipes repaired.....	18
Water pipes repaired .....	256
Yard division walls .....	77
Defective and bulging external walls .....	52
Dry rot .....	—

## BAKEHOUSES.

Cleansed and limewashed.....	88
Sanitary accommodation im- proved .....	2
Drains repaired.....	1
Animals removed .....	—
Other nuisances abated .....	7

DAIRIES, COWSHEDS, AND  
MILKSHOPS.

Reconstructed .....	18
Dairy .....	—
Middensteads .....	—
Floors repaired .....	3
Improved Lighting .....	—
Improved ventilation .....	—
Improved drainage .....	—
Cubic space increased .....	—
Internal walls and ceilings re- paired.....	—
Improved yard space .....	—

## ICE CREAM MANUFACTORIES.

Cleansing and limewashing .....	52
Sanitary conditions improved....	18

## SCHOOLS.

Playgrounds—repairs to drains ..	—
"    repairs to asphalte..	—
"    repairs to paving..	—
"    repairs to flags....	—
Urinals repaired or improved ....	10
Sanitary accommodation repaired or improved.....	10

## WORKSHOPS &amp; WORKPLACES.

Cleansed and limewashed.....	22
Provided with sufficient sanitary accommodation.....	2
Sanitary condition improved ....	10
Ventilation improved .....	—
Overcrowding abated .....	—
Drains repaired.....	1
Other nuisances abated .....	11

## DRAINS.

Re-layed .....	113
Cleansed or repaired.....	203
Intercepting traps provided ....	—
Soil pipes repaired.....	13
Self-cleansing gullies provided ..	73

## WATER CLOSETS.

Cleansed.....	64
Repaired .....	122
Cisterns and flushing fittings re- paired.....	382
Provided in substitution of slop- water closets .....	56

## PAIL CLOSETS.

Nuisance abated .....	—
Converted to W.C.'s .....	3
Tipplers converted to pedestal wash-down.....	56

## OFFENSIVE TRADES PREMISES.

Limewashed .....	29
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## COMMON LODGING-HOUSES.

Cleansed and limewashed.....	28
Total nuisances abated .....	25



TABLE 13—(Continued).

OFFENSIVE ACCUMULATIONS.		ASH RECEPTACLES.	
Removed .....	104	Repaired .....	—
ANIMALS KEPT AS TO BE A NUISANCE.		Portable receptacles provided....	131
Nuisances abated .....	5	STABLE PREMISES.	
SEWERS.		Removing manure .....	4
Cleansed .....	24	Reconstructed middensteads ....	3
SLOP-WATER CLOSETS.		HOUSES LET IN LODGINGS.	
Nuisances abated .....	31	Nuisances abated .....	113
Converted to W.C.'s .....	56	CANAL BOATS.	
ASHPITS.		Cask for water provided .....	1
Abolished .....	202	Certificates renewed .....	—
		Leaky condition .....	—
		Repairing and Painting .....	—
		Masters without Certificates ....	1
		Unsuitable Certificates .....	—

## DETAILS OF INSPECTION WORK.

Schools .....	67	Dirty Houses .....	140
Hospitals .....	—	Common Yards, Back Roads and Passages .....	6096
Tents, Vans, Sheds .....	297	Infected Houses .....	3815
Factories .....	433	Work in progress .....	7088
Workshops .....	1284	Housing and Town Planning Acts...	2056
Workplaces .....	176	Fishmongers and Greengrocers....	386
Bakehouses—Ordinary .....	628	Ashes Receptacles .....	209
Underground .....	4	Food Preparing and Storing Places.	253
Cowsheds .....	1	Outworkers' Premises .....	5
Dairies and Milkshops .....	1954	Enquiries <i>re</i> Milk Supply .....	92
Ice Cream Premises .....	392	Dwelling Houses <i>re</i> Nuisances ....	4170
Offensive Trade Premises .....	367	Samples of—	
Fried Fish Shops .....	519	Water procured .....	1
Common Lodging Houses .....	506	Milk purchased for Sediment Test .....	455
Stable Premises .....	621	Milk purchased for Bacterio- logical Examination .....	56
Offensive Accumulations .....	120	Milk purchased for Bacterio- logical content .....	245
Animals so kept as to be a nuisance	11	Freezing of Closets .....	262
Sewers .....	24	Labelling of Condensed Milk Tins.	318
Street Gullies .....	190	Insufficient Water Supply .....	82
Canal Boats .....	151	Miscellaneous .....	138
Smoke Observations .....	87		
Theatres and Cinemas .....	95		
Houses Let-in-Lodgings .....	1869		

## HOUSING.

## 1.—NUMBER OF NEW HOUSES ERECTED DURING THE YEAR :—

(a) Total .. .. .	278
(b) With State assistance under the Housing Acts, 1919 or 1923 :—	
(i) By the Local Authority .. .. .	—
(ii) By other Bodies or Persons .. .. .	—

*Dwelling Houses :—Inspection.*

(1) Total number of Dwelling Houses inspected for housing defects (under P.H.A. or Housing Acts) .. .. .	4888
(2) No. of Dwelling Houses which were inspected and recorded under the Housing (Inspection of District) Reg. 1910.. .. .	40
(3) No. of Dwelling Houses found to be in a state so dangerous or injurious to health as to be unfit for human habitation .. .. .	—
(4) No. of Dwelling Houses (exclusive of those referred to under the preceding sub-heading) found not to be in all respects reasonably fit for human habitation .. .. .	3692

## 2.—REMEDY OF DEFECTS WITHOUT SERVICE OF FORMAL NOTICES :—

No. of Defective Dwelling Houses rendered fit in consequence of informal action by the Local Authority or their Officers .. .. .	1749
--	------

## 3.—ACTION UNDER STATUTORY POWERS :—

*A.—Proceedings under Section 3 of the Housing Act, 1925.*

(i) No. of Dwelling Houses in respect of which Notices were served requiring repairs .. .. .	5
(ii) Number of Dwelling Houses which were rendered fit after service of formal notices—	
(a) By Owners .. .. .	4
(b) By Local Authority in default of Owners.. .. .	1
(iii) No. of Dwelling Houses in respect of which Closing Orders became operative in pursuance of declarations by Owners of Intention to close .. .. .	—

*B.—Proceedings under Public Health Acts.*

(i) No. of Dwelling Houses in respect of which Notices were served requiring defects to be remedied .. .. .	333
(ii) No. of Dwelling Houses in which defects were remedied after formal notices—	
(a) By Owners .. .. .	288
(b) By Local Authority in default of Owners.. .. .	—

*C.—Proceedings under Sections 11, 14, and 15 of the Housing Act, 1925.*

No proceedings have been taken under the above.

*Underground Sleeping Rooms.—Housing Act, 1928, Section 1.*

No such rooms are known to the Staff of the Department.

#### THE TESTING OF DRAINS.

No. of Smoke Tests	..	..	..	..	..	..	515
No. of Water Tests	..	..	..	..	..	..	75
No. of Colour Tests	..	..	..	..	..	..	111
Breaking Down	..	..	..	..	..	..	28
Inspections made while work was in progress					..	..	1018
Total number of Defects found	..	..	..	..	..	..	306
No. of Informal Notices Served	..	..	..	..	..	..	131
No. of Formal Notices Served	..	..	..	..	..	..	5
No. of Defects Completed	..	..	..	..	..	..	278
No. of Defects outstanding at end of 1929	..	..	..	..	..	..	28

#### THE RAG FLOCK ACTS, 1911 & 1928.

There are three premises in Blackburn where rag-flock is used. The flock is not manufactured locally, but is purchased under guarantee of Government Standard of Cleanliness.

The three premises concerned are visited in the course of routine district inspections.

TABLE 14.

FACTORIES, WORKSHOPS AND WORKPLACES.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

PREMISES. (1)	NUMBER OF		
	Inspections (2)	Written Notices (3)	Prosecutions (4)
FACTORIES ... .. (Including Factory Laundries)	433	4	...
WORKSHOPS ... .. (Including Workshop Laundries)	1284	26	...
WORKPLACES ... .. (Other than Outworkers' premises)	176	...	...
TOTAL ... ..	1893	30	...

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

PARTICULARS. (I)	Number of Defects.			Number of offences in respect to which prosecut'ns were insti- tuted. (5)
	Found. (2)	Remedied. (3)	Referred to H.M. Inspector. (4)	
<i>Nuisances under the Public Health Acts :—</i>				
Want of Cleanliness ... ..	36	35	...	...
Want of Ventilation ... ..	...	...	...	...
Overcrowding ... ..	...	...	...	...
Want of drainage of floors ... ..	...	...	...	...
Other Nuisances ... ..	18	18	...	...
<i>Sanitary Accommodation :—</i>				
Insufficient... ..	6	4	...	...
Unsuitable or defective ... ..	13	16	...	...
Not separate for sexes ... ..	1	1	...	...
<i>Offences under the Factory and Workshops Acts :—</i>				
Illegal occupation of underground bakehouse (s. 101) ... ..	...	...	...	...
Other offences ... ..	71	75	...	...
(Excluding offences relating to outwork and offences under the Sections mentioned in the Schedule to the Ministry of Health (Factories and Workshops Trans- fer of Powers) Order, 1921.)				
TOTAL ... ..	145	149	...	...

**TABLE 15.****FACTORIES.**

" Sanitary accommodation for females not sufficient, there being three w.c.'s for over 90 females, as follows :—

2 w.c.'s in yard for over 70 weavers ;  
1 w.c. in mill for 20 winders.

There were no inside fastenings to the yard w.c.'s, which were also in an unclean condition."

Notice sent, and two disused closets inside the weaving shed were re-conditioned and put into use, and the other matters were remedied at once.

" Sanitary accommodation unsuitable in that the w.c. communicates directly with the workroom, and is in an unsatisfactory condition."

Notice sent. The closet was abolished and an existing sanitary convenience in the yard was provided.

" Ceiling lime-washed only once per year, and not twice ; last carried out in June, 1928."

Notice sent and work completed.

" Washing down of painted parts, and lime-washing, overdue. Last date registered, March, 1928."

Notice sent and work completed.

**TABLE 16.****WORKSHOPS.**

" Walls require cleansing." Verbal notice was given and the work was completed at once.

**OUTWORKERS.**

During 1929 five lists of outworkers were received from three makers of wearing apparel. The lists contained the names of eight contractors and twelve workers. The premises were inspected and were found to be satisfactory.

**TABLE 17.**  
**DISINFECTION.**

Number of Rooms Sprayed :—

Tuberculosis .. .. .	183
Fever .. .. .	1252
Vermin .. .. .	32
Institutions .. .. .	166
Schools .. .. .	77
Others .. .. .	60

Articles Disinfected by Steam .. .. . 19313

Number of Articles Destroyed by Consent of Owners .. .. . 535

Amount of Disinfectant Distributed :—

Chloros .. .. .	(Gallons)	{	Schools ..	176
			Houses ..	87
Disinfectant Powder .. .. .				—
Persons Cleansed at Disinfection Station .. .. .				43
Cleansings ... .. .				93
Library Books Fumigated .. .. .				399
Private Books Fumigated .. .. .				73
School Books Fumigated .. .. .				101

### CLEANSING OF PERSONS.

During 1929 43 persons were dealt with at the Throstle Street Disinfecting and Cleansing Station. The conditions for which baths were given were as under :—

Verminous Conditions .. .. .	—
Scabies .. .. .	18
Scarlet Fever .. .. .	—
Small-Pox Contacts .. .. .	25

Eleven of the persons dealt with were referred from the School Medical Department. The total number of baths given was 43.



## SMOKE OBSERVATIONS.

There are 181 factory chimneys in the town, 103 of which are provided with smoke preventing appliances. The types of appliances are as under :—

Proctor's Mechanical Stokers	..	..	..	..	..	75
Leach Mechanical Stokers	..	..	..	..	..	6
Bennis Mechanical Stokers	..	..	..	..	..	3
Hodgkinson Mechanical Stokers	..	..	..	..	..	3
Whittaker's Mechanical Stokers	..	..	..	..	..	1
G.S.E. Mechanical Stoker	..	..	..	..	..	1
Sirocco Fans	..	..	..	..	..	3
Super Heaters	..	..	..	..	..	7
Edgar Allen Green's	..	..	..	..	..	4

During the year 176 smoke observations were made, and in 60 smoke was emitted in excessive quantities. Six notices were served during the year, of which two were informal and four statutory.

In cases where smoke has been emitted in excessive quantity, the premises are visited by the smoke inspector, who gives verbal notice to abate, investigates the cause and advises as to prevention. In most instances this course of action has been sufficient to secure abatement.

The standards of smoke permissible from a factory chimney in Blackburn are as follows :—

One boiler..	..	..	..	4 minutes black smoke in the hour.
Two boilers	..	..	..	5     „     „     „
Three boilers	..	..	..	6     „     „     „
Four boilers or more	..	..	..	7     „     „     „

# THE SANITARY CONDITION AND WATER SUPPLY OF SCHOOLS.

The following Table gives details of the Sanitary Accommodation provided at the Schools in the Borough :—

TABLE 18.

	School Population	Water Closets				Urinals		Pail Closets	No. of Children to each W.C.
		No. of pedestal W.C.'s flushed with separate cisterns	No. of pedestal W.C.'s flushed with automatic cisterns	No. of trough closets together with No. of seats flushed	Automatically	By Hand	No. with sparge pipes	No. without sparge pipes	
Accrington Road C. ....	502	27	..	..	..	..	18	..	18
Audley Range C. ....	313	..	..	13	..	..	9	..	24
Bank Top C. ....	337	2	..	..	12	..	6	6	24
Bangor Street C. ....	373	..	25	..	..	..	18	..	15
Blakey Moor Central ....	737	7	28	..	..	..	20	..	21
Cedar Street C. ....	420	18	..	..	..	..	16	..	23
Christ Church C.E. ....	596	..	15	5	5	..	7	8	24
Emmanuel C.E. ....	381	..	..	21	..	..	10	..	18
Furthergate C. ....	302	..	..	14	..	..	8	..	22
Four Lanes End C. ....	130	..	..	6	..	..	10	..	21
Griffin C.E. ....	320	2	12	..	..	..	10	6	23
Holy Trinity C.E. ....	464	3	13	..	..	..	10	..	28
Lower Darwen C. ....	111	..	..	9	..	..	5	..	12
Mill Hill C. ....	295	..	14	7	..	..	20	..	14
Maudsley Street British ....	293	1	..	9	..	..	8	..	29
Moss Street C. ....	333	2	11	..	..	..	10	..	26
C. of E. Central ....	464	2	13	..	..	..	18	..	31
Park Road C. ....	514	13	..	..	..	..	4	..	47
Regent Street Special ....	23	2	6	..	..	3	..	..	3
St. Aidan's C.E. ....	280	12	4	..	..	..	10	..	18
St. Alban's R.C. ....	862	16	..	10	..	..	10	..	33
St. Alban's Higher Grade (Boys) ....	116	6	..	..	..	..	10	..	19
St. Anne's R.C. ....	759	2	..	20	..	..	9	..	35
St. Andrew's C.E. ....	219	..	..	11	..	..	6	..	20
St. Barnabas' C.E. ....	454	..	13	..	..	..	8	..	35
St. Bartholomew's C.E. ....	255	..	..	13	..	..	12	..	20
St. Gabriel's C.E. ....	119	..	..	7	..	..	4	..	17
St. James' C.E. ....	221	1	9	..	..	..	8	..	22
St. James' C.E. (Black-a-Moor) ....	96	..	3	4	..	..	8	..	14
St. James' C.E. (Guide) ....	108	..	..	10	..	2	6	..	10
St. John's C.E. ....	616	..	..	23	..	9	..	..	26
St. Joseph's R.C. ....	522	2	..	14	..	..	9	..	33
St. Luke's C.E. ....	291	..	14	..	..	..	9	..	21
St. Michael's C.E. ....	251	..	..	6	6	4	..	..	21
St. Matthew's C.E. ....	349	1	..	12	..	..	10	..	27
St. Mary's R.C. ....	516	1	..	10	..	4	4	..	47
St. Paul's C.E. ....	375	..	13	..	..	4	..	..	29
St. Peter's C.E. ....	275	15	..	..	..	..	15	..	18
St. Peter's R.C. ....	443	1	19	..	..	17	..	..	22
St. Stephen's C.E. ....	320	1	..	21	..	..	7	..	15
St. Silas' C.E. ....	356	..	16	..	..	6	6	..	22
St. Thomas' C.E. ....	536	..	12	..	..	..	12	..	45
Sacred Heart R.C. ....	133	1	..	8	..	3	..	..	15
Wensley Fold C.E. ....	277	2	5	..	3	10	..	..	27
Witten C.E. (Infants) ....	66	..	6	..	..	6	..	..	11
Roe Lee Park C. ....	219	17	..	..	..	18	..	..	13
TOTALS .....		157	251	253	26	232	244	..	..

Water at the Schools is drawn from the Corporation mains and is satisfactory as regards quantity and quality.

A sanitary survey of each school is made three times each year by the Assistant School Medical Officer, who reports thereon to the School Medical Officer who is also Medical Officer of Health. Any sanitary defects found are reported to the Education Authority, who take such action as may be necessary.

Absences from school due to sickness are reported to the School Medical Department through the School Attendance Officers.

Much valuable information regarding the existence of non-notifiable infectious disease has reached the Health Office through the agency of Head Teachers and School Attendance Officers.

Convalescents from infectious disease and contacts who have been excluded from school are not readmitted until the Head Teacher receives a clearance certificate issued from the Health Department. Children convalescent from infectious disease are excluded from school for varying periods following discharge from hospital, or, in the case of children who have been nursed at home, following disinfection of the home. The period of exclusion depends upon the disease from which the child has suffered.

A full survey of the health of the school-child is contained in the Annual Report on the work of the School Medical Service.

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*PART III.*



Food Supply.

## SUPERVISION OF FOOD SUPPLY.

During the year all food-preparing premises and premises engaged in the production or distribution of milk have been visited by the Veterinary Inspector. The Medical Officer of Health has visited all farms competing in the Clean Milk Competition, and has paid frequent visits to dairies, farms and food-preparing premises in the Borough.

The number of farms supplying Certified Milk to Blackburn (3) remains the same as last year, and 18 farms, the same as last year, are supplying Grade " A " Milk to the Borough.

In 1927 2,689 gallons of Grade " A " Milk, and 249 gallons of Certified Milk, were consumed each week by Blackburn residents.

In 1928 the figures were 2,884 and 249 respectively.

The quantities for the year under review were 3,121 and 136 gallons of Grade " A " and Certified Milk respectively, an increase of 237 gallons of Grade " A " Milk per week.

Grade " A " and Certified Milks owe their purity to the cleanliness of the premises, utensils, milkers and cows employed in their production. Apart from the process of cooling, they are subjected to no form of mechanical treatment at any stage of their production.

Pasteurised milk is milk which has been held at a temperature of 140° F. to 150° F. for thirty minutes, and then immediately cooled to 55° F., or lower. The object of pasteurisation is to destroy pathogenic organisms contained in the milk, and to reduce the number of non-pathogenic organisms, especially those concerned in souring the milk. It is true that an adequately pasteurised milk constitutes a clean and safe article of food, but it might be argued that the process of pasteurisation will not encourage the farmer who produces milk for this form of treatment to exercise adequate care in its production.

The aim of every farmer and of every local authority should be to ensure a milk supply which is clean at the source and which is independent of artificial methods as a guarantee of purity.



## ICE CREAM.

All ice-cream preparing premises have been visited during the year and have been subject to such supervision as our inadequate powers allow.

In many instances ice-cream is produced and distributed under conditions which would not be tolerated if applied to milk production or storage.

It is true that there are firms of high repute retailing and manufacturing ice-cream in the Borough whose methods leave little to be desired. These firms are, unfortunately, in the minority, and in number are far exceeded by a type of itinerant and casual vendor, whose methods can only be described as grossly unsatisfactory. In many cases the "ice-cream" is prepared in living-rooms, distributed from an uncleanly van or barrow and spread on dusty and germ-laden biscuits.

As ice-cream is a much-consumed commodity, particularly by the younger members of the community, it is not unreasonable that Local Authorities should have legal power to exercise adequate control and supervision over the trade. Such supervision would be unwelcome only to those whose methods are undesirable, whereas the reputable branch of the trade in Blackburn, which has always co-operated closely with the Department, would benefit by legislation which would free the mind of the public of suspicion regarding the methods under which ice-cream is manufactured and sold.

Samples of ice-cream submitted to bacteriological examination during the year have clearly indicated the need of further legal powers to control the ice-cream trade. The result of examinations has demonstrated that :—

- (1) It is possible to produce and distribute clean ice-cream. Samples taken have contained as few as 5,400 bacteria per cc., and have contained no B. Coli in 1 cc.
- (2) Many of the samples gave bacteriological evidence of gross contamination. Of 24 samples taken B. Coli was found in 1/100,000th of a c.c.

# REPORT BY THE VETERINARY INSPECTOR (MR. E. J. BURNDRED, M.R.C.V.S., D.V.H.)

## MILK (SPECIAL DESIGNATIONS) ORDER, 1923.

*Certified Milk.* The number of farms holding the certificate of the Ministry of Health and supplying Certified Milk to Blackburn is three.

Two are local, the other is some distance away, and consequently the milk from the latter is not delivered the same day as it is produced.

The price of the milk ranges from 7½d. to 4d. per pint.

Grade " A " (tuberculin tested) milk is being used at the Corporation Hospital.

*Grade " A " Milk.* There are 18 farms in the district where Grade " A " milk is produced ; five of these are in the Borough and 13 in the County area. In addition, there are 12 retailers of Grade " A " milk. The prices are 3½d. and 4d. per pint.

*Pasteurised Milk.* One dairy in the Borough is licensed for the pasteurisation of milk, and one dairy obtains a supply from a licensed establishment outside Blackburn.

A dairy equipped for the pasteurisation and bottling of milk is being erected in an adjoining township for a number of Co-operative Societies, including that of Blackburn, so that in the near future a much larger proportion of the milk consumed will probably be pasteurised. It is to be hoped that this pasteurised milk will displace ordinary milk rather than the other graded milks.

*Sterilised Milk,* which is not a graded milk, is now sent into Blackburn, from factories outside.

## FARM AND DAIRY CATTLE INSPECTION.

During the year I paid 228 visits to farms, inspected 396 cowsheds, and examined the udders of 4,649 cows.

Five cows on four farms in the Borough were found to be affected with tuberculosis of the udder. All five cows were slaughtered, and on post mortem examination, three were found to be affected with advanced tuberculosis, and in the remaining two, the disease was not advanced.

Eight cows showing clinical evidence of tuberculosis were slaughtered, and one died.

They were all affected with Tuberculosis in an advanced degree.

Eight cows were suffering from Mastitis, and during the affection the milk was not used for human food.

*Bacteriological Examination of Milk for Tubercle Bacilli.* During the year 283 samples of milk were collected and examined for the presence of tubercle bacilli.

The samples were made up as follows :—280 mixed samples were taken in the course of delivery ; 3 special samples were taken direct from individual cows showing some abnormality of the udder.

Of the 280 mixed samples taken, 4 contained tubercle bacilli, 225 were negative, and in 51 cases the experimental animal died before a definite diagnosis could be made.

Of the 3 special samples, 1 was positive and 2 were negative.

Three of the four mixed milks were from farms outside the Borough, and one from a farm in the Borough. At the farm in the Borough a cow affected with tuberculosis of the udder had been discovered three weeks before the report of tubercle bacilli in milk was received, but at the other farms no affected cows were found, and subsequent control samples were negative.

Mixed samples of milk supplied to the Royal Infirmary and the Corporation Hospital were taken periodically and examined for the presence of tubercle bacilli, and on each occasion were found to be free.

#### EXAMINATION OF MILK FOR DIRT.

During the year 460 samples of milk were taken and submitted to me and examined for the presence of dirt.

Eighty-seven of these samples were taken from producer-retailers whose premises are within the Borough, and were classified as follows :—

Clean	..	..	..	..	..	18 or 20.7%
Fairly Clean	..	..	..	..	..	51 or 58.6%
Contaminated	..	..	..	..	..	15 or 17.2%
Grossly Contaminated		..	..	..	..	3 or 3.45%

Three hundred and ten samples were taken from producer-retailers whose premises are outside the Borough :—

Clean	..	..	..	..	..	89 or 28·7%
Fairly Clean	..	..	..	..	..	149 or 48·06%
Contaminated	..	..	..	..	..	65 or 20·97%
Grossly Contaminated	..	..	..	..	..	6 or 1·93%
Very Grossly Contaminated	..	..	..	..	..	1 or 0·32%

Sixty-two samples were taken from retailers who reside in the Borough, but who procure their supplies from producers whose premises are, for the most part, outside the Borough.

Clean	..	..	..	..	..	2 or 3·2%
Fairly Clean	..	..	..	..	..	28 or 45·1%
Contaminated	..	..	..	..	..	27 or 43·5%
Grossly Contaminated	..	..	..	..	..	5 or 8·06%

One sample was taken from a retailer who resides outside the Borough, and also obtains his supplies from a farm outside the Borough :—

Contaminated	..	..	..	..	..	1
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The policy of improving conditions of production and storage, both in methods and equipment, has been continued throughout the year, and as a whole, the producers in the Borough have reached a satisfactory standard.

As mentioned in last year's Report, retail purveyors in the Borough have been encouraged to provide two rooms, separate from the house, for the washing and storing of utensils and for storing milk respectively. At the end of the year 28 of the 40 retail purveyors had so adapted their premises.

The walls of both rooms are cemented and the floors concreted, in order to facilitate cleansing. The washing-up rooms are provided with a sink, a galvanised iron rack for the utensils, and hot and cold water. In addition a boiler is installed, heated by gas or primus stove, fitted with a steaming cabinet, boiler and cabinet being so constructed as to be capable of steaming both the large churns and small cans and bottles.

The milk room is fitted with a concrete cooling trough for the churns, and a bracket for the cooler.

## MILK, DAIRIES, COWS AND COWSHED INSPECTION.

*Clean Milk Competition.* This was the eighth Clean Milk Competition, and, as in 1928, it extended over the whole year.

There were two classes. " A " open to all producers of Certified or Grade " A " milk whose milk was sold in Blackburn. " B " open to all other milk producers whose milk was sold in Blackburn.

A silver cup, presented by Mr. Alderman George Burke, J.P., in 1929, will be competed for in 1930. It has been agreed to limit competitors in this class to farmers whose main source of income is dairy-farming, and in making the awards not only will the quality of the milk be taken into consideration, but due attention will be paid by the judges to the general farming methods employed.

The winner will hold the cup for one year ; he will also receive and retain a miniature cup and gold medal, presented by Mr. Alderman George Burke, J.P.

The " Redmayne " Cup is held for one year by the winner in Class A, and, in addition, he receives a miniature of the cup and a gold medal, the latter usually being given to the producer's wife.

The " Porritt " Cup is held for one year by the winner in Class B, and in this class also the producer receives a miniature cup and a gold medal.

There was a slight improvement in the number of entrants, but the ordinary milk producers still do not take much interest.

There were 14 entries for Class A, and six for Class B.

## DAIRIES, COWSHEDS AND MILKSHOPS.

Cowshed Floors Reconstructed or Repaired ...	...	...	3
Dairies Reconstructed ...	...	...	18



## SECTION 80 BLACKBURN CORPORATION ACT, 1922.

## FOOD PREPARING PREMISES.

This Section reads as follows :—

“ Any premises ordinarily used, or proposed to be ordinarily used, for the preparation or manufacture of sausages, pressed, potted or preserved meat, fish or other food, intended for the purposes of sale, shall be registered by the owner or occupier thereof with the Corporation from time to time in such manner as they may direct, and no premises shall be used for the purposes aforesaid unless the same are so registered, and the Corporation shall have power to refuse registration of any premises where the conditions are unsuitable.”

There are 49 premises registered under the above section, but in addition there are a large number of food preparing premises which are exempt from registration.

Two hundred and fifty-three visits were made to such premises. Generally they were found to comply with requirements.

In certain cases, the necessity for repairs was pointed out, and in other cases suggestions for improvements were made and in all cases improvements were effected.

## MILK-SHOPS.

The Food and Drugs Inspector has visited regularly all shops from which milk is sold.

Exemption from registration of premises from which bottled milk only is sold has resulted in this class of milk being retailed from unsatisfactory premises. During the year the Borough has been inundated with bottled sterilised milk which is being retailed, in the majority of cases, from small mixed-business shops. In many of these shops such commodities as paraffin oil, firewood, chandlery and potatoes are also sold, and the nature of the premises and trades carried on is such as would preclude registration were such a course possible. It is true that bottled milk is not so liable to contamination as “ loose ” milk, but exemption from registration of premises from which bottled milk only is sold makes it very difficult to raise the general standard of milk retailing premises.



In an endeavour to improve existing conditions it has been suggested to those purveying milk from mixed business premises, that they instal a special cabinet, similar to a telephone kiosk, in which the milk may be kept separate from other commodities, and consequently exposed to less risk of contamination. Many of the retailers have carried out the suggestion.

### THE BACTERIOLOGICAL EXAMINATION OF MILK.

Two hundred and eighty-three samples were submitted to the Bacteriologist, Public Health Laboratories, Liverpool. The following is a summary of his findings :—

#### *Bacillus Coli Content :—*

Not found in 1 cubic centimetre	..	..	..	..	..	..	138
Found in 1 c.c. only	..	..	..	..	..	..	55
„ 0·1 c.c.	..	..	..	..	..	..	35
„ 0·01 c.c.	..	..	..	..	..	..	9
„ 0·001	..	..	..	..	..	..	14
„ 0·0001	..	..	..	..	..	..	16
„ 0·00001	..	..	..	..	..	..	16

The presence of *Bacillus Coli*, or a member of its group, is an indication of manurial contamination of the milk. The above results show 48·7% clean ; 31·8% with manurial contamination, and 19·4% grossly contaminated.

#### *Presence of Tubercle Bacilli.—Milk Samples Taken in Course of Delivery—*

Two hundred and eighty samples taken were submitted to inoculation tests for tubercle bacilli in the University Laboratory, Liverpool.

Of this number, four were found to contain the organisms.

This gives a percentage of milks sold in Blackburn and found to contain living tubercle bacilli as 1·42%.

Tubercle bacilli were absent in 225 samples, whilst in 51 samples the guinea pig died before a result could be obtained.

## FARMS VISITED.

	FARMS	COWSHEDS	Cows
January .. .. .	9	17	271
February .. .. .	10	20	248
March .. .. .	57	99	1212
April .. .. .	19	33	394
May .. .. .	15	26	275
June .. .. .	6	11	121
July .. .. .	16	26	247
August .. .. .	31	50	574
September .. .. .	13	22	266
October .. .. .	13	25	293
November .. .. .	8	17	196
December .. .. .	31	50	552
	228	396	4649

## BAKEHOUSES.

There are approximately 315 premises in the Borough where bread, biscuits or confectionery are made for sale. Included in this number there are 64 factories where power is employed for mixing purposes. In most of the factories electrical power is provided in self-contained mixing machines, which take up little space, and this has proved of such assistance that gradually the preference for hand-mixed confectionery is being broken down.

On many of the premises baking is done in the rooms used as sculleries by the family, and although these bakehouses are clean and well-kept, it would be preferable if the baking were carried out in an apartment specially prepared for it.

## THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

The Public Analyst is Professor W. H. Roberts, M.Sc., F.I.C. Samples taken under the above Acts are submitted to him for examination at the Public Health Laboratory, Liverpool.

The number of samples examined during 1929 was 815, compared with 792 in 1928. Thirty-nine, or 4·7%, of the total proved on examination to be adulterated, or not up to standard.

Four hundred and thirty-three samples of milk, 289 of which were informal, were taken during the year. Sixteen samples, or 3·6%, were reported not to conform with the standard prescribed by the Ministry of Agriculture. In 1929, 15 of the defective samples were found to be considerably below the legal standards. If an informal sample proves to be not genuine on analysis, a formal sample is purchased and submitted to the analyst.

Three formal samples presented marked deficiency, and the three vendors concerned were prosecuted. The total amount of fines inflicted was £8/4/0.

#### THE PUBLIC HEALTH (CONDENSED MILK) REGULATIONS, 1923 AND 1927.

Fifty-five samples, all of which were properly labelled, were purchased under the above Regulations, and were found on analysis to be genuine.

These samples are included in Table 19, the Food and Drugs (Adulteration) Act.

#### THE PUBLIC HEALTH (DRIED MILK) REGULATIONS, 1923 AND 1927.

It has not been necessary to take action under the above Regulations.

TABLE 19.

## THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

	Samples Taken.		Samples Genuine.		Samples Adulterated.	
	Formal.	Inform'l	Formal.	Inform'l	Formal.	Inform'l
Milk .....	132	112	129	105	3	7
Graded Milk.. ..	12	177	12	171	-	6
Butter .....	-	26	-	26	-	-
Margarine .....	-	23	-	23	-	-
Cheese .....	-	18	-	18	-	-
Lard .....	-	6	-	6	-	-
Coffee .....	-	19	-	19	-	-
Cocoa .....	-	27	-	27	-	-
Tea .....	-	14	-	14	-	-
Jam .....	-	20	-	20	-	-
Lemon Cheese .....	-	14	-	14	-	-
Ham .....	-	14	-	8	-	6
Bacon .....	-	19	-	9	-	10
Tinned Pears ..	-	10	-	8	-	2
„ Peaches .....	-	6	-	5	-	1
„ Pineapple .....	-	3	-	3	-	-
„ Plums .....	-	1	-	-	-	1
Fruit Salad .....	-	5	-	4	-	1
Condensed Full Cream Milk (Sweetened) .....	-	19	-	19	-	-
Condensed Full Cream Milk (Unsweetened) .....	-	20	-	20	-	-
Condensed Machine Skimmed Milk (Sweetened) ....	-	16	-	16	-	-
Marmalade .....	-	1	-	1	-	-
Beef Dripping .....	-	3	-	3	-	-
Baking Powder .....	-	17	-	17	-	-
Custard Powder .....	-	15	-	15	-	-
Egg Powder .....	-	11	-	11	-	-
Tinned Lobster .....	-	1	-	-	-	1
Salmon and Shrimp Paste.....	-	1	-	1	-	-
Skimmed Milk.....	1	-	1	-	-	-
Rice .....	-	10	-	10	-	-
Tinned Apricot .....	-	5	-	4	-	1
Cream .....	-	17	-	17	-	-
Sugar .....	-	1	-	1	-	-
Whiskey .....	-	1	-	1	-	-
Rum .....	-	1	-	1	-	-
Oatmeal .....	-	1	-	1	-	-
Sago .....	-	1	-	1	-	-
Ice Cream.....	-	11	-	11	-	-
Pepper .....	-	1	-	1	-	-
Sausages .....	-	1	-	1	-	-
Self-Raising Flour .....	-	1	-	1	-	-
Minced Meat .....	-	1	-	1	-	-
TOTALS .....	145	670	142	634	3	36



TABLE 20—(Continued).  
THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.—ACTION TAKEN IN REGARD TO ADULTERATED SAMPLES.

Articles Purchased.	Number Analysed	Number Genuine	Number Adulterated	Number of Sample	Formal	Informal	Amount of Adulteration.	Action Taken.
Bacon .....	19	9	10	250	...	Yes	Contained 250 parts of Sodium Nitrite per million parts of the sample ...	Sold under a warranty. Warning Letter.
				36	...	Yes	" 50	"
				110	...	Yes	" 300	"
				124	...	Yes	" 250	"
				182	...	Yes	" 100	"
				202	...	Yes	" 500	"
				232	...	Yes	" 150	"
				233	...	Yes	" 600	"
				258	...	Yes	" 360	"
				259	...	Yes	" 240	"
Ham .....	14	8	6	440	...	Yes	" 500	"
				37	...	Yes	" 100	"
				109	...	Yes	" 600	"
				123	...	Yes	" 300	"
				183	...	Yes	" 1200	"
				203	...	Yes	" 100	"
Tinned Pears	10	8	2	9	...	Yes	Contained 250 parts of tin per 100,000 parts of the sample ...	"
" Peaches...	6	5	1	332	...	Yes	" 160	"
" Plums ...	1	...	1	325	...	Yes	" 250	"
" Lobster...	1	...	1	53	...	Yes	" 189	"
" Apricots .	5	4	1	55	...	Yes	" 150	"
" Fruit				331	...	Yes	" 400	"
Salad	5	4	1	66	...	Yes	" 230	"



AVERAGE COMPOSITION OF MILK SOLD IN BLACKBURN.  
YEAR 1929.

MONTH	No. of Samples Taken.	% of Fat	% of other Solids.
January ... ..	36	3.90	8.96
February ... ..	34	3.78	8.94
March ... ..	21	3.79	8.99
April ... ..	42	3.59	8.88
May ... ..	39	3.90	9.04
June ... ..	35	3.61	9.02
July ... ..	37	3.65	9.01
August ... ..	22	3.78	9.02
September ... ..	48	3.76	9.14
October ... ..	33	3.67	9.17
November ... ..	52	4.12	9.05
December ... ..	34	4.06	8.99
Average ... ..	433	3.80	9.01

PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS)  
REGULATIONS, 1925.

No action was necessary with regard to tuberculous employees in the Milk Trade.

THE PUBLIC HEALTH (CONDENSED MILK) REGULATIONS,  
1923 & 1927.

Fifty-five samples, all of which were properly labelled, were purchased under the above Regulations, and were found on analysis to be genuine.

These samples are included in Table 19, Food and Drugs (Adulteration) Act.

THE PUBLIC HEALTH (DRIED MILK) REGULATIONS, 1923 & 1927.

No action has been taken under the above Regulations.

## THE PUBLIC HEALTH (PRESERVATIVES, &c., IN FOOD) REGULATIONS, 1925 & 1927.

Ten samples of bacon proved on analysis to contain Sodium Nitrites varying from 50 parts to 600 parts per million parts of the sample.

Six samples of ham proved on analysis to contain Sodium Nitrites varying from 100 parts to 1,200 parts per million parts of the sample. *See Table No. 19.*

## SUCCESSFUL PROSECUTIONS OTHER THAN UNDER THE FOOD AND DRUGS (ADULTERATION) ACT.

One milk vendor fined 5/- for selling milk out of an unlabelled can.

One milk vendor fined 20/- for selling milk out of an unlabelled can.

One milk vendor fined 20/- for selling milk out of a motor car which was not clean, and 10/- for not having his name and address on the motor car.

One milk vendor fined 10/- for selling milk out of an unlabelled can.

One milk vendor fined 4/- for selling milk without being registered.

One milk vendor fined 5/- for selling milk without the name and address on can.

One milk vendor fined 10/- for selling milk out of an unlabelled can.

One milk vendor fined 10/- for bottling milk in the milk float.

One milk vendor fined 40/- for a breach of the Milk and Dairies Order, 1926.

## THE FERTILISERS AND FEEDING STUFFS ACT, 1926.

During the year one sample of meat meal and one sample of meat and bone meal were submitted to the agricultural analyst.

Both samples were found to be adulterated, and after consultation with the Ministry of Agriculture, warning letters were sent.

## REPORT OF WORK DONE UNDER THE DISEASES OF ANIMALS ACTS AND ORDERS.

*Foot and Mouth Disease.* There were 38 outbreaks in Great Britain necessitating the slaughter of 3,539 animals, which were diseased or had been exposed to infection. This compares very favourably with the preceding three years. 1928, 138 outbreaks, with 11,441 animals slaughtered; 1927, 143 outbreaks, with 9,940 animals slaughtered; 1926, 204 outbreaks, with 20,002 animals slaughtered. There were no outbreaks in Blackburn or district, and consequently no restrictions were imposed.

*Anthrax.* There were 439 outbreaks in Great Britain, affecting 529 animals.

Two cases were discovered at the two knacker yards in the Borough. In one case the carcase of a cow which had died at a farm in the county area was brought to the knacker yard for disposal. Suspicious signs were noticed and immediate notification was made.

I examined material from the carcase microscopically, and found anthrax bacilli. The carcase was removed to the Audley Destructor, where it was cremated. The case was reported to the County Authority for their action at the farm, and the knacker premises, vehicle, and clothing of the driver and knackerman were disinfected. The driver and knackerman both of whom had handled the carcase, received prophylactic treatment at the Royal Infirmary.

In the other case, the carcase of a cow was brought to the knacker yard from a farm in the Borough. In this case also suspicious signs were noticed, and on microscopical examination anthrax bacilli were found.

The same procedure was followed as in the previous case, and in addition I superintended the disinfection of the cow-shed, yard, and midden-stead at the farm, and kept the remainder of the cattle under observation until all danger of infection was passed.

Routine microscopical examination of blood smears from carcasses of animals arriving at the Abattoir in a dead or dying condition was carried out throughout the year, but no cases were found.

*Parasitic Mange.* There were 203 outbreaks reported in Great Britain, involving 386 animals.

One case was reported in Blackburn by the Police, and the owner was fined for failing to notify and also for failing to keep the animal separate from other animals.

The animal was kept under observation during treatment and until cured.

*Glanders.* No cases occurred in Great Britain.

*Sheep Scab.* There were 658 outbreaks in Great Britain. No cases occurred in Blackburn.

*Swine Fever.* 2983 outbreaks occurred in Great Britain. Swine fever was suspected by the owner on a farm in the Borough, but on investigation was not confirmed.

*Tuberculosis.* Five cases of tuberculosis of the udder; seven cases of tuberculous emaciation; and one case of tuberculosis with cough were dealt with under the Tuberculosis Order, 1925. One other animal was reported for tuberculous emaciation, but died before it could be dealt with.

*Cattle Market.* The approximate number of animals exposed for sale was :—

<i>Year.</i>	<i>Cattle.</i>	<i>Sheep.</i>	<i>Calves.</i>	<i>Pigs.</i>	<i>Horses</i>	<i>Asses.</i>
1929	6947	9552	2291	966	19	...

<i>Year.</i>	<i>Cattle.</i>	<i>Sheep.</i>	<i>Calves.</i>	<i>Pigs.</i>	<i>Horses</i>	<i>Asses</i>
1928	6432	5655	2041	1045	19	...
1927	9960	9922	2675	1333	...	21
1926	8092	7410	2285	930	20	...
1925	7171	6962	2346	486	23	...
1924	5609	5608	3493	620	24	...
1923	7716	10026	3040	721	35	...
1922	4650	11289	2681	362	554	...
1921	4681	1913	2812	835	416	...
1920	9341	942	2258	530	365	...
1919	8345	17223	2188	163	269	...

E. J. BURNDRED,

*Veterinary and Chief Meat Inspector.*

## TUBERCULOSIS ORDER OF 1925.

	CHRONIC COUGH WITH T.B.	T.B. EMACIATION	T.B. UDDER
January .. ..	1	—	—
February .. ..	—	1	2
March .. ..	—	1	1
April .. ..	—	2	—
May .. ..	—	—	—
June .. ..	—	—	—
July .. ..	—	—	—
August .. ..	—	—	—
September .. ..	—	1	—
October .. ..	—	—	—
November .. ..	—	1	1
December .. ..	—	1	1
	1	7	5

One T.B. emaciation was reported but died before the case could be dealt with.

## MEAT INSPECTION.

The number of animals slaughtered at the Public Abattoir was 96,637, this being an increase of 1,810 compared with 1928, and a decrease of 1,770 compared with 1927.

The large waste of food material, due to condemnation of diseased carcasses, was in the main caused by Tuberculosis.

The number of susceptible animals (cattle, calves, pigs) affected with Tuberculosis during 1929 was 435, or 2·22% of those slaughtered.

Corresponding percentages were, in 1928, 2·9; 1927, 2·079; 1926, 2·15; 1925, 1·83; 1924, 1·87; 1923, 1·64.

Of 1,185 cows slaughtered, 143, or 12·07%, were found to be affected with Tuberculosis in some degree.

Heifers show a lower proportion affected, only 6 out of 615 slaughtered, or 0·97%.

Of 1,146 bulls slaughtered, 20, or 1·74% were affected.

Of 7,250 bullocks, only 47, or 0·65%, were affected.



Calves show a lower percentage still : of 1,934 slaughtered, only 1, or 0·05% were affected.

Of 7,444 pigs slaughtered, 218 were affected, or a percentage of 2·928%.

The number of carcasses in which the disease was so advanced as to necessitate total condemnation was 84, compared with 111 in 1928 ; 107 in 1927 ; 107 in 1926 ; 69 in 1925 ; 85 in 1924, and 54 in 1923.

In 1929 71 carcasses of cattle were totally condemned as being unfit for human food, and of these, 61 were affected with Tuberculosis.

Liver fluke, both in cattle and sheep, again showed itself as a national scourge.

It accounted for the condemnation of 6,249 livers, compared with 6,042 in 1928, 3,836 in 1927, and 2,335 in 1926.

In addition to the work at the Abattoirs, visits were regularly paid to the only private slaughterhouse in the Borough, butchers and other meat shops, food preparing premises, wholesale and retail fish markets and meat market.

**TABLE 21.**

NUMBER OF ANIMALS SLAUGHTERED AT THE PUBLIC ABATTOIR.

1929.	Beasts	Sheep	Calves	Pigs	Goats	Total
January .. ..	775	5641	166	766	..	7348
February .. ..	997	6490	206	930	..	8623
March .. .. .	760	5123	246	634	..	6763
April .. .. .	821	5482	100	502	..	6905
May .. .. .	871	6749	90	437	..	8147
June .. .. .	647	6259	60	246	..	7212
July .. .. .	701	7650	61	237	..	8649
August .. .. .	872	7867	198	360	..	9297
September .. .	761	6085	140	380	..	7366
October .. ..	1052	7425	278	759	..	9514
November .. .	1089	7078	265	935	..	9367
December .. .	849	5206	133	1258	..	7446
<b>TOTAL .. ..</b>	<b>10195</b>	<b>77055</b>	<b>1943</b>	<b>7444</b>	<b>..</b>	<b>96637</b>



NUMBER OF CARCASSES AND PORTIONS OF CARCASSES  
BROUGHT TO THE ABATTOIR.

TABLE 22.

1929.	CARCASSES.			BEEF		
	Beef	Mutton	Pork	Fore Qrs.	Hind Qrs.	Buttocks
January .. ..	88	24	49	...	...	...
February .. ..	9	30	36	...	...	...
March .. .. .	8	24	28	...	...	...
April .. .. .	9	24	31	...	...	...
May .. .. .	12	30	31	...	...	...
June .. .. .	9	24	29	...	...	...
July .. .. .	12	30	10	...	...	...
August .. .. .	10	24	19	1	1	...
September .. .	9	24	20	...	...	...
October .. .	8	30	33	...	...	...
November .. .	5	24	34	...	...	...
December .. .	3	24	150	...	...	...
TOTALS	182	312	470	1	1	...

	CASES OF			Lengths of Pork	Tins of Meat
	Kidneys	Pork	Liver		
January .. .. .	17	7	1	...	...
February .. .. .	23	...	...	40	...
March .. .. .	10	...	...	...	...
April .. .. .	10	...	...	...	...
May .. .. .	20	...	...	...	...
June .. .. .	5	...	...	...	...
July .. .. .	13	...	...	...	...
August .. .. .	...	...	...	...	...
September .. .	...	...	...	...	...
October .. .	5	...	...	...	...
November .. .	...	...	...	...	...
December .. .	8	...	...	...	...
TOTALS .. ..	111	7	1	40	...

TABLE 23.

ORGANS AND PARTS OF CARCASSES EXAMINED, REJECTED AND DES. ROYED, FOR DISEASES OTHER THAN TUBERCULOSIS.

Disease or Condition	Diaphragm	Tongues	Heads	Lungs	Hearts	Livers	Stomachs	Udders	Intestines	Kidneys	Tails	Lbs. of Meat
Fluke ..	..	..	..	1	..	6249	..	..	..	..	..	..
Cirrhosis ..	..	..	..	..	..	384	..	..	..	..	..	..
Angioma ..	..	..	..	..	..	44	..	..	..	..	..	..
Unsound ..	..	..	48	46	2	4	2	..	..	4	..	1737
Abscesses ..	..	..	4	..	..	21	7	..	..	..	..	..
Actinomycosis ..	..	..	5	1	..	..	..	..	..	..	..	..
Mammitis ..	..	..	..	..	..	..	..	111	..	..	..	..
Parasitic ..	..	..	..	44	..	35	..	..	6	2	..	..
Nephritis ..	..	..	..	..	..	..	..	..	..	23	..	..
Bruised ..	..	..	..	..	..	..	..	..	..	..	..	2733
Congested ..	..	..	..	3	..	3	..	..	..	..	..	..
Pericarditis ..	..	..	..	..	3	..	..	..	..	..	..	..
Pneumonia ..	..	..	..	7	..	..	..	..	..	..	..	..
Necrosis ..	..	..	..	..	..	1	..	..	..	..	..	..
TOTAL ..	—	—	57	102	5	6741	9	111	6	29	—	4470

**TABLE 24.**  
DISEASED CARCASSES EXAMINED, REJECTED AND DESTROYED FOR DISEASES, ETC.,  
OTHER THAN TUBERCULOSIS.

## CARCASSES.

BEEF.		MUTTON.		VEAL.		PORK.	
DISEASE.	No.	DISEASE.	No.	DISEASE.	No.	DISEASE.	No.
Difficult Parturition	2	Asphyxia ...	1	Joint Ill ...	31	Pneumonia ...	3
Edematous ...	1	Edematous ...	56	Jaundice ...	4	Edematous ...	3
Extensively Bruised	1	Congested ...	58	Congested ...	8	Jaundice ...	2
Fevered ...	1	Nephritis ...	4	Immature ...	26	Congested ...	2
Pyæmia ...	1	Parasitic ...	7	Edematous ...	4	Septicæmia ...	1
Septicæmia ...	1	Pneumonia ...	7	Scour ...	1	Nephritis ...	1
Congested ...	1	Difficult Parturition	2	Unsound ...	1		
		Extensively Bruised	3	Pyæmia ...	2		
		Unsound ...	4	Septicæmia ...	8		
		Emaciation ...	1	Pneumonia ...	1		
	8		143		86		12

TABLE 25.

## TUBERCULOUS CARCASSES EXAMINED AND REJECTED.

1929	Cows		Heifers		Bulls		Bullocks		Calves		Sheep		Pigs		Fowl		Totals	
	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected	Examined	Rejected
January ..	20	5	..	..	..	..	2	2	..	..	..	..	34	4	4	4	56	15
February..	12	2	..	..	1	..	5	1	..	..	..	..	17	4	..	..	35	7
March ..	11	5	..	..	1	..	3	..	..	..	..	..	18	1	..	..	33	6
April ..	11	4	..	1	..	..	4	1	..	..	..	..	15	2	..	..	31	8
May ..	7	1	..	..	1	..	2	1	..	..	..	..	22	4	..	..	32	6
June ..	7	..	1	..	3	1	5	..	..	..	..	..	16	3	4	..	32	8
July ..	12	4	..	..	3	..	1	..	..	..	..	..	7	..	..	..	23	4
August ..	12	2	2	1	1	..	3	1	1	1	..	..	15	1	2	..	34	8
September	10	3	1	..	1	..	4	1	..	..	..	..	11	2	..	..	27	9
October ..	13	2	1	1	2	..	5	1	..	..	..	..	20	2	..	..	41	6
November	12	3	..	..	4	..	8	4	..	..	..	..	18	5	..	..	42	12
December	16	4	..	..	3	..	5	..	..	..	..	..	25	4	..	..	49	8
TOTALS ..	143	35	6	3	20	1	47	12	1	1	..	..	218	32	10	435	94	



TABLE 27.

FISH, RABBITS, ETC., EXAMINED, REJECTED AND DESTROYED.

Boxes	FISH				Rabbits	Tins of Meat	Tins of Cream	Tins of Fruit	Fowl	Turkeys	Ducks	Strawberries (lbs.)	Crates of Lettuce	Cherries (lbs.)	Chips of Tomatoes	Chips of Blackberries
	Bags	Tins of Fish	Shrimps (Pots)													
278½	7	1	24	413	14	1	6	4	4	6	48	20	420	11	18	

Eggs ... 507

Biscuit Meal ... 1 cwt.

## NUMBER OF VISITS TO INSPECT FOOD.

Fish Shops ..	..	..	..	..	..	..	..	..	890
Provision Shops ..	..	..	..	..	..	..	..	..	1048
Butchers' Shops ..	..	..	..	..	..	..	..	..	2305
Private Slaughterhouses ..	..	..	..	..	..	..	..	..	45
Meat Market ..	..	..	..	..	..	..	..	..	194
Fish Market ..	..	..	..	..	..	..	..	..	282
Railway Station ..	..	..	..	..	..	..	..	..	283
									5047

## CARCASSES, ETC., SENT FOR UTILIZATION.

					Tons.	Cwts.	Qrs.
January ..	..	..	..	..	3	9	0
February ..	..	..	..	..	4	9	2
March ..	..	..	..	..	3	7	2
April ..	..	..	..	..	4	7	0
May ..	..	..	..	..	3	18	2
June ..	..	..	..	..	1	17	2
July ..	..	..	..	..	3	2	0
August ..	..	..	..	..	4	5	0
September ..	..	..	..	..	2	6	0
October ..	..	..	..	..	5	3	0
November ..	..	..	..	..	6	10	0
December ..	..	..	..	..	5	17	0
TOTAL ..					48	12	0



*PART IV.*

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Prevalence and Control  
*of*  
Infectious Disease.

TABLE 28.

CASES OF INFECTIOUS DISEASE NOTIFIED DURING THE YEAR 1929.

NOTIFIABLE DISEASE.	Cases notified in whole District.											Total cases notified in each Locality.													Total Deaths in the Corporation Hospital	Total cases removed to Corporation Hospital	Total Deaths in the Borough			
	At Ages—Years.											St. Stephen's	Trinity	St. Michael's	St. John's	St. Silas'	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas'	Park	St. Luke's	St. Mark's				St. Andrew's		
	Under 1	1 to 2	2 to 3	3 to 4	4 to 5	5 to 10	10 to 15	15 to 20	20 to 35	35 to 45	45 to 55																		55 to 65	65 and upwards
Small-pox...	34	—	1	—	2	9	11	1	6	1	2	1	—	10	17	—	—	—	—	—	—	2	—	—	5	17	5	34	—	18
Cholera ...	—	—	—	—	—	—	—	—	—	—	—	—	—	5	5	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Diphtheria (including Membranous Group)	197	1	3	9	15	95	31	9	20	3	2	—	—	100	83	57	28	17	53	113	118	49	21	27	24	634	—	2	201	
Erysipelas...	57	—	—	—	—	1	1	1	7	7	17	12	11	5	4	4	3	1	2	4	9	8	4	—	6	7	—	—	8	
Scarlet Fever	761	4	8	31	28	58	364	156	54	53	3	2	—	100	83	57	28	17	53	113	118	49	21	27	24	634	—	—	2	
Typhus Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3
Enteric Fever	6	—	—	—	—	—	—	—	1	3	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Puerperal Fever	9	—	—	—	—	—	—	—	8	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Puerperal Pyrexia	16	—	—	—	—	—	—	—	15	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Cerebro-spinal Meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Ophthalmia Neonatorum	13	13	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
Pulmonary Tuberculosis	64	—	—	—	—	—	1	3	19	13	9	12	7	2	4	5	2	1	—	—	—	—	—	—	—	—	—	—	—	59
Other forms of Tuberculosis	61	—	—	—	—	2	—	8	29	14	4	3	1	4	7	5	3	4	7	3	18	2	1	3	1	—	—	—	—	55
Poliomyelitis	16	1	1	—	1	—	3	2	6	—	1	4	—	3	1	3	—	—	—	—	—	—	—	—	—	—	—	—	—	6
Encephalitis Lethargica	14	—	—	—	—	—	—	2	2	—	1	2	—	2	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	7
Dysentery...	2	—	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2
Malaria ...	5	—	—	—	—	—	—	—	2	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
*Diarrhoea ...	305	14	21	9	9	26	10	11	52	31	39	30	43	36	29	21	17	21	11	26	41	25	8	14	26	—	—	—	—	—
†Chicken-pox	6	6	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8
†Chicken-pox	257	18	20	21	24	36	126	10	—	—	—	—	—	8	9	—	2	18	7	17	32	38	59	17	24	9	—	—	—	—
TOTALS ...	1823	57	54	71	71	121	628	223	92	221	78	65	63	185	159	127	95	64	93	67	113	208	263	179	73	103	94	852	364	364

\* Notifiable from July 1st to October 31st only.

† Notifiable from January 1st to September 30th only.

\* Notifiable from July 1st to October 31st only.

† Notifiable from January 1st to September 30th only.

TABLE 29.

## INFECTIOUS DISEASES. AGE INCIDENCE OF CASES NOTIFIED.

	Under One Year		1—2 Years		2—3 Years		3—4 Years		4—5 Years		5—10 Years		10—15 Years		15—20 Years		20—25 Years		25—35 Years		35—45 Years		45—65 Years		Over 65 Years		Total		Totals 1925		Totals 1926		Totals 1927		Totals 1928	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F		
Scarlet Fever .....	1	3	4	4	17	14	16	12	30	28	173	191	81	75	24	30	26	27	1	2	1	1	..	..	..	374	387	133	171	92	126	59	66	37	33	
Diphtheria .....	..	1	2	1	3	6	6	3	4	11	41	54	13	18	4	5	7	13	2	1	..	2	..	..	..	82	115	31	36	38	43	39	60	21	41	
Erysipelas.....	..	..	..	..	..	..	..	..	..	..	..	1	..	1	..	1	5	2	3	4	12	17	5	6	6	25	32	14	25	15	29	29	37	19	26	
Enteric Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	1	2	1	1	..	..	..	..	3	3	1	1	3	6	..	2	2	1	
Puerperal Fever .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	8	..	1	..	..	..	..	..	..	9	..	13	..	11	..	7	..	10	
Puerperal Pyrexia .....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	15	..	1	..	..	..	..	..	..	16	..	..	..	11	..	19	..	..	
Ophthalmia Neonatorum	5	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	8	12	13	10	9	10	9	9	8	
Pneumonia Ae. Primary..	7	7	7	14	4	5	6	4	4	5	15	11	2	8	9	2	39	13	20	11	40	29	12	31	165	140	153	89	83	66	154	102	205	153		
Tuberculosis—Lungs .....	..	..	..	..	..	..	..	..	..	..	..	2	1	..	3	8	19	29	13	14	21	7	7	1	64	61	80	87	69	63	50	61	77	73		
do. Other Forms.	..	1	1	1	..	..	..	..	1	..	1	2	..	3	2	2	6	2	..	..	5	3	..	..	..	16	14	32	34	21	23	27	13	31	32	
Encephalitis Lethargica..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	2	1	..	..	..	1	1	1	1	4	4	1	5	4	7	1	16	16	
Diarrhoea .....	2	4	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	4	11	10	6	6	..	1	2	2	
TOTALS .....	15	24	14	20	24	25	28	19	39	44	230	262	97	105	42	48	103	111	41	36	86	60	24	39	737	793	471	480	342	397	375	378	419	395		

TABLE 30.

## Infectious Diseases.

CASE INCIDENCE PER 1000 OF THE POPULATION.

	St. Stephen's	Trinity:	St. Michael's	St. John's	St. Silas	St. Paul's	St. Peter's	St. Mary's	St. Matthew's	St. Thomas	Park	St. Luke's	St. Mark's	St. Andrew's
Scarlet Fever .....	9.17	9.46	6.41	6.32	2.91	2.89	2.56	9.70	12.25	9.88	5.22	2.80	2.61	2.26
Diphtheria .....	0.91	1.93	2.47	1.12	0.67	1.24	1.20	2.01	2.27	2.17	2.45	0.93	0.87	1.60
Erysipelas .....	0.45	0.57	0.45	0.56	0.22	0.31	0.15	0.36	0.43	0.75	0.85	0.53	...	0.56
Enteric Fever .....	...	...	0.22	...	...	...	...	...	...	0.08	0.21	0.13	...	...
Puerperal Fever .....	...	0.11	...	...	0.22	...	...	0.18	...	0.08	0.21	0.13	0.09	...
Puerperal Pyrexia .....	0.18	...	0.22	...	...	0.10	...	0.18	0.21	0.16	0.31	0.26	0.09	...
Ophthalmia Neonatorum .....	0.18	0.22	...	0.14	...	0.20	0.30	0.18	...	...	0.10	0.13	...	0.09
Acute Primary Pneumonia ..	3.30	3.30	2.36	1.68	2.01	1.75	3.16	2.01	2.81	3.43	2.66	1.06	1.25	2.45
Tuberculosis—Lungs .....	1.28	1.25	1.12	1.26	0.56	0.62	1.20	2.19	0.75	1.84	0.74	0.66	0.67	0.18
do. Other Forms ..	0.45	0.22	0.45	0.28	0.22	0.41	...	0.36	0.21	0.08	...	...	0.29	0.28
Encephalitis Lethargica .....	...	...	...	...	0.11	...	...	0.18	...	0.08	...	0.13	...	0.09
Diarrhoea .....	0.27	...	...	...	...	...	...	0.18	0.10	0.08	...	...	...	...





TABLE 32.

## NOTIFICATION OF INFECTIOUS DISEASES.

Disease	Incidence Rate per 1000 of Population					Death Rate per 1000 of Population					Housing Conditions																	
											1929			1928			1927			1926			1925					
	1929	1928	1927	1926	1925	1929	1928	1927	1926	1925	rooms 1-3	rooms 4-5	rooms 5 over	rooms 1-3	rooms 4-5	rooms 5 over	rooms 1-3	rooms 4-5	rooms 5 over	rooms 1-3	rooms 4-5	rooms 5 over	rooms 1-3	rooms 4-5	rooms 5 over			
Total cases notified	Total Deaths																											
Cases admitted to Hospital																												
Small Pox	34	34	0.26	0.07	0.04	0.07	0.00	0.00	0.00	0.00	26	28	6	..	9	1	..	6	69	50	14	147	57	16	100	88		
Scarlet Fever	761	634	6.07	0.96	1.00	1.75	2.41	0.01	0.00	0.008	139	139	139	139	87	28	..	28	28	50	14	147	57	16	100	88		
Diphtheria	197	175	1.57	0.99	0.79	0.65	0.52	0.14	0.11	0.09	13	146	38	3	3	23	..	23	60	38	2	51	28	2	39	26		
Enteric Fever	6	4	0.04	0.008	0.01	0.07	0.01	0.00	0.00	0.008	3	3	3	3	1	..	..	1	1	1	..	4	5	..	..	2		
Puerperal Fever	9	2	0.07	0.07	0.05	0.08	0.10	0.01	0.008	0.02	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Puerperal Pyrexia	16	1	0.12	0.07	0.15	0.08	..	0.007	0.00	0.00	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Pneumonia	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Acute Primary and Acute Influenzal	305	..	2.43	1.77	2.05	1.19	1.90	1.60	1.21	0.40	7	226	72	7	152	63	..	152	2193	61	3	106	40	..	..	..		
Erysipelas	57	7	0.45	0.33	0.53	0.35	0.30	0.02	0.00	0.05	3	42	12	1	27	14	..	27	46	18	..	..	..	..	..	..		
Ophthalmia Neonatorum	13	..	0.10	0.13	0.15	0.15	0.19	0.00	0.00	0.00	..	10	3	..	16	1	..	16	15	4	..	14	5	..	..	..		
Encephalitis Lethargica	5	1	0.04	0.05	0.06	0.07	0.03	0.01	0.04	0.07	..	3	2	..	6	1	..	6	..	..	..	..	..	..	..	..		
Tuberculosis-Pulmonary	64	..	0.51	0.41	0.40	0.55	0.64	0.47	0.28	0.40	2	32	30	6	33	13	..	33	36	11	6	50	13	5	51	26		
Males	61	..	0.48	0.43	0.49	0.50	0.68	0.43	0.37	0.37	1	44	16	..	41	13	..	41	48	10	8	47	8	6	56	25		
Females	125	..	0.99	0.84	0.89	1.06	1.33	0.90	0.65	0.77	3	76	143	6	74	26	..	74	84	21	14	97	21	11	107	51		
Non-Pulmonary:	16	..	0.12	0.15	0.21	0.16	0.29	0.04	0.08	0.05	..	10	6	..	14	5	..	14	21	6	..	19	2	1	25	11		
Males	14	..	0.11	0.13	0.10	0.18	0.26	0.06	0.08	0.05	..	10	4	..	8	9	..	8	10	2	1	21	1	..	24	10		
Females	30	..	0.23	0.28	0.32	0.35	0.55	0.10	0.16	0.11	..	20	10	..	22	14	..	22	31	8	1	40	3	1	49	21		
Diarrhoea	6	..	0.04	0.007	0.008	0.09	0.16	0.06	0.06	0.19	..	6	..	..	1	..	..	..	..	..	..	..	..	..	..	..		
TOTAL	1719	858	364	12.48	5.64	6.08	7.55	2.90	2.26	1.74	55	1271	393	23	511	172	25	636	230	34	476	164	30	295	188			

** {	3 cases of Puerperal Fever from outside the Borough.
}	2 " " Pyrexia "



TABLE 33.

NOTIFICATION OF INFECTIOUS DISEASES.—ROOM SPACE IN RELATION TO INFECTIOUS DISEASES INCIDENCE.

Disease.	1929				1928				1927				1926				1925																				
	Admitted to Hospital.		Remaining at Home.		Admitted to Hospital.		Remaining at Home.		Admitted to Hospital.		Remaining at Home.		Admitted to Hospital.		Remaining at Home.		Admitted to Hospital.		Remaining at Home.																		
	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room	No. of persons per room																	
	Less than one	1—2	More than two	Total	Less than one	1—2	More than two	Total	Less than one	1—2	More than two	Total	Less than one	1—2	More than two	Total	Less than one	1—2	More than two	Total																	
Scarlet Fever	12	287	335	634	18	91	18	127	7	60	37	104	3	12	2	17	25	68	7	100	17	8	25	32	108	26	166	30	22	52	179	10	244	25	35	50	
Diphtheria	10	94	71	175	2	13	7	22	4	48	59	111	3	9	1	13	27	63	7	97	2	...	2	22	39	12	73	1	7	8	10	43	53	2	12	14	
Enteric Fever	...	3	1	4	...	2	...	2	...	1	...	...	...	...	...	...	...	1	2	...	3	...	...	...	...	5	3	8	...	1	1	2	...	...	...	...	
TOTAL	22	384	407	813	20	106	25	151	11	109	96	216	6	21	3	30	53	133	14	200	19	8	27	54	152	41	247	31	30	61	65	224	10	299	27	47	64

## SCARLET FEVER.

During 1929 761 cases of scarlet fever were notified, an incidence of 6·07 cases per 1,000 living. The majority of the cases were of a mild type, only two deaths being associated with the epidemic. Six hundred and thirty-four cases, or 83·3% of the cases notified, were removed to the Hospital.

In only one case where the home circumstances warranted removal was any difficulty experienced in securing parental consent. This case was that of a child, aged eight years, living under conditions so overcrowded that adequate home isolation was impossible. As the father was persistent in his refusal to allow the child to be removed, application was made to the Justices for a removal order under Section 124 of the Public Health Act, 1875. The application was granted.

Many of the cases were so mild in character that the parents concerned did not suspect the presence of scarlet fever. Accordingly, no precautions were observed, the cases attended school in the ordinary way, visited cinemas and other places of entertainment, and were discovered only as a result of visits paid to schools by members of the School Medical or Health Staffs. It was not uncommon for a practitioner called in to see a suspected case of scarlet fever to find one or two "missed," and previously unsuspected, cases in the same household. The mild type of the disease rendered control extremely difficult and hampered the efforts of your staff.

As was the case in 1928, the heaviest incidence was noted amongst the 5-15 age group, where 520 cases, or 68·33% of the total notified, occurred.

Although the Dick Test and subsequent immunisation of positive reactors have not been employed by the Health Department, a scheme for the adoption of this preventive method will shortly be submitted for your consideration. No "return" cases were brought to the notice of the Health Department during the year.

**TABLE 34.**  
**SCARLET FEVER.**

Year.	Cases Notified in Black- burn.	Attack Rate per 100,000 of popu- lation.	No. of Deaths.	Per- centage of Deaths to cases notified.	All Cases Admitted to Hospital.		
					No. Admitted	No. of Deaths.	Per- centage of Deaths to cases treated.
1904 .....	458	347.8	13	2.84	336	12	3.57
1905 .....	1578	1188.7	76	4.81	1107	52	4.60
1906 .....	849	635.5	33	3.88	625	27	4.30
1907 .....	544	479.0	21	3.86	381	12	3.10
1908 .....	595	439.8	20	3.36	434	18	4.10
1909 .....	1013	744.1	53	5.23	760	39	5.10
1910 .....	795	580.3	27	3.39	538	17	3.10
1911 .....	343	248.9	10	2.91	241	5	2.00
1912 .....	116	87.1	3	2.59	78	2	2.50
1913 .....	268	200.8	1	0.37	199	2	1.01
1914 .....	704	524.1	10	1.40	560	6	1.07
1915 .....	460	341.5	6	1.30	360	5	1.40
1916 .....	153	116.1	4	2.60	101	2	1.90
1917 .....	96	76.0	2	2.08	68	1	1.50
1918 .....	150	120.1	2	1.30	122	2	1.60
1919 .....	136	103.6	2	1.47	105	2	1.90
1920 .....	181	120.9	3	1.60	164	3	2.40
1921 .....	211	163.0	1	0.40	162	1	0.60
1922 .....	231	178.5	2	0.80	186	2	0.80
1923 .....	216	167.4	0	0.00	181	0	0.00
1924 .....	70	54.2	1	1.43	62	1	1.60
1925 .....	304	239.5	3	0.98	274	3	1.10
1926 .....	218	175.2	1	0.46	192	1	0.53
1927 .....	125	100.4	1	0.80	116	1	0.86
1928 .....	121	96.7	0	0.00	104	0	0.00
1929 .....	761	607.3	2	0.26	634	1	0.15

## DIPHThERIA.

One hundred and ninety-seven cases of diphtheria were notified during the year, a figure equivalent to an attack rate of 157·2 per 100,000 of population. The number of cases notified is the highest recorded in Blackburn since 1901, in which year 284 cases occurred. Unlike the outbreak of scarlet fever, this disease manifested itself in severe form, and accounted for 18 deaths, a case mortality rate of 10·1%.

The incidence of the disease again fell most heavily on the 5–15 age group, in which group 126 cases, or 63·96% of the total, occurred.

One hundred and seventy-five cases, or 88·8% of those notified, were removed to Hospital.

Of the fatal cases, none had received anti-toxin treatment before the third day of the disease. As stated in last year's report, the prognosis in diphtheria is influenced largely, almost entirely, by the period which elapses between onset and administration of anti-toxin. The appended Table illustrates the influence of delayed anti-toxin therapy on diphtheria mortality.

TABLE 35.

Sex.	Age (in years)	DAY OF DISEASE.			
		Medical Advice Sought.	Admitted to Hospital.	Antitoxin Given.	Death
Female .....	8	3rd	6th	5th	16th
Female .....	5	4th	5th	5th	7th
Female .....	5	4th	5th	4th	6th
Female .....	6	3rd	3rd	3rd	3rd
Male .....	5	3rd	5th	5th	6th
Female .....	3	1st	11th	11th	12th
Male .....	7	8th	9th	9th	10th
Male .....	3	8th	9th	9th	9th
Female .....	5	4th	4th	4th	9th
Male .....	9	5th	5th	5th	6th
Male .....	14	4th	4th	4th	4th
Male .....	10	3rd	4th	4th	13th
Female .....	7	4th	5th	5th	41st
Female .....	5	5th	5th	5th	5th
Male .....	2	3rd	4th	4th	4th
Female .....	5	3rd	4th	4th	4th
Female .....	4	4th	6th	6th	14th

The majority of deaths from diphtheria have been directly due to failure on the part of parents to summon medical aid in the early stages of the disease. The slightest degree of sore throat in a child calls for immediate attention, if the tragedies associated with diphtheria are to be avoided.

#### SUPPLY OF ANTITOXIN TO PRACTITIONERS.

A supply of antitoxin for the use of practitioners is kept at the Health Office. A further quantity is kept at the Police Office, to which practitioners apply when the Health Office is closed.

During the year 762,000 units of antitoxin have been given to practitioners in the area.

**TABLE 36.**  
**DIPHTHERIA.**

Year.	Cases Notified in Black- burn.	Attack Rate per 100,000 of popu- lation.	No. of Deaths.	Per- centage of Deaths to cases notified.	All Cases Admitted to Hospital.		
					No. Admitted	No. of Deaths.	Per- centage of Deaths to cases treated.
1904 .....	60	45.5	11	18.3	11	2	41.1
1905 .....	157	118.2	33	21.0	4	0	<i>Nil.</i>
1906 .....	166	124.2	26	15.7	56	5	8.9
1907 .....	150	111.5	17	11.3	63	5	7.9
1908 .....	100	73.9	12	12.0	39	0	<i>Nil.</i>
1909 .....	102	74.9	18	17.6	29	5	17.2
1910 .....	96	70.0	22	22.9	42	9	21.4
1911 .....	107	77.6	28	26.1	54	9	16.6
1912 .....	55	41.3	9	16.4	36	5	13.9
1913 .....	76	56.7	7	9.2	55	7	12.7
1914 .....	62	46.1	7	11.3	37	2	5.4
1915 .....	39	28.9	8	20.6	24	3	12.5
1916 .....	52	39.5	9	17.3	32	3	9.3
1917 .....	50	39.5	8	16.0	41	4	9.9
1918 .....	57	45.6	11	19.3	56	4	7.1
1919 .....	30	22.8	3	10.0	24	1	4.1
1920 .....	69	49.3	10	14.5	59	7	13.2
1921 .....	45	34.8	6	13.4	27	3	11.0
1922 .....	52	40.1	7	13.4	38	6	13.0
1923 .....	35	27.1	1	2.8	32	1	3.1
1924 .....	62	48.0	3	4.8	48	2	4.1
1925 .....	67	52.8	8	11.9	58	6	7.7
1926 .....	81	65.0	8	9.9	73	8	9.3
1927 .....	99	79.5	11	11.1	106	12	11.3
1928 .....	124	99.1	14	11.2	111	7	6.3
1929 .....	197	157.2	18	9.1	175	16	9.2

The above Table shows (a) That the incidence of Diphtheria is increasing. (b) That on the whole the disease is less fatal than 20 years ago. (c) That a much larger number of cases seek hospital treatment. Last year saw the greatest number of admissions for this complaint since the hospital was opened. Some of these cases were out of the Borough cases and are not, therefore, included in the figure 197 in column 2.



### THE SCHICK TEST.

A Diphtheria Prevention Clinic opened at Victoria Street at the end of November, 1929, has been held thrice weekly. By the end of the year 109 individuals had attended the Clinic.

The object of the Schick Test is to determine, by means of a simple intradermal reaction, the susceptibility of an individual to infection by diphtheria. Such as are susceptible (positive reactors) are then immunised by means of three injections, at weekly intervals, of diphtheria prophylactic.

The susceptibility, or otherwise, of an individual to any particular infectious disease is influenced by a variety of factors. With reference to diphtheria, it has been ascertained that children up to the age of six months exhibit considerable immunity, and that between the ages of six months and seven years possibly 70%—80% are susceptible. Above the age of seven years susceptibility varies widely, although this state tends to be followed by one of immunity, which gradually develops with advancing age.

As children between the ages of six months and seven years display a comparative susceptibility to diphtheria, all in this age group are immunised without undergoing the preliminary test.

Above the age of seven years susceptibility varies widely, and the test has been employed in the case of all above this age. Following the test positive reactors receive a course of three immunising injections.

It is proposed that all who have received the full course of treatment attend the Clinic for re-test four months after the last dose of prophylactic.

The appended Tables give particulars of numbers tested and treated at the Clinic up to December 31st, 1929.

#### NUMBERS TESTED.

AGE GROUP	RESULT OF TEST		TOTAL
	Positive (Susceptible)	Negative (Immune)	
7—10	9	5	14
10—15	8	5	13
15+	22	35	57
TOTAL ...	39	45	84

## NUMBERS TREATED.

Age Group.	Course Complete	Still under Treatment 31/12/29.	Total.
0—5	18	2	20
5—10	10	4	14
10—15	4	—	4
15 +	5	15	20
TOTAL ...	37	21	58

Immediately following the institution of the Clinic propaganda was carried out by the exhibition of posters and by means of leaflets distributed through the agency of religious and social bodies. The initial response was good, but it was soon realised that a more intimate propaganda was necessary for the success of the campaign. Personal contact has now been established with parents attending the Child Welfare Clinics and School Medical Inspections, and addresses have been given to parents at School Assemblies and Open Days. Following the latter, consent forms as appended, are left at the homes of the children and collected by the District Sanitary Inspectors and appointments are then made for those children whose parents consent to treatment.

## COUNTY BOROUGH OF BLACKBURN.

HEALTH DEPARTMENT,  
VICTORIA STREET.

## PROTECTION AGAINST DIPHTHERIA.

To the best of my knowledge  
has never suffered from Diphtheria.

I understand that it is possible to protect him/her against that disease.

I consent to this protection being given.

*Signature of Father or other legal Guardian.*

*Date*

*Address*

*Witnessed by*

Consent forms, as appended, are left by the ambulance nurse for signature of the father or guardian of scarlet fever cases removed to the Corporation Hospital.

COUNTY BOROUGH OF BLACKBURN.

CORPORATION HOSPITAL,

PARK LEE ROAD.

PROTECTION AGAINST DIPHTHERIA.

To the best of my knowledge  
has never suffered from Diphtheria.

I understand that while he/she is a patient at the Corporation Hospital suffering from Scarlet Fever it is possible by means of a simple test to discover whether he/she is liable to contract diphtheria, and, in the event of his/her being susceptible, to protect him/her against that disease.

I consent to this test being made and to this protection being given.

*Signature of Father or other legal Guardian.*

*Date*

*Address*

*Witnessed by*

The response to our efforts has been, and continues to be, satisfactory.

The benefits to be derived from immunisation may be briefly summarised as under :—

- (1) Immunisation thus conferred is probably absolute for a period of nine years.
- (2) Diphtheria occurring in an individual previously immunised, but in whom the immunity has waned through lapse of time, will manifest itself in a less virulent form than in an individual who has never undergone preventive treatment.
- (3) Preventive treatment carried out in the early years of life will tide a child over the most critical period qua diphtheria.
- (4) Diphtheria prophylaxis is economically sound.

The test and subsequent immunisation cost approximately three shillings per case, the Hospital maintenance of a case of diphtheria approximately £20, a sum sufficient to protect 130 children.

In the year under review 175 cases of diphtheria were treated at the Corporation Hospital at a cost in the region of £2,500, which sum would immunise almost the entire school population of the Borough.

### SMALL POX.

I am indebted to Mr. G. G. Dickinson, the Vaccination Officer, for the figures necessary to compile the subjoined Table.

**TABLE 37.**

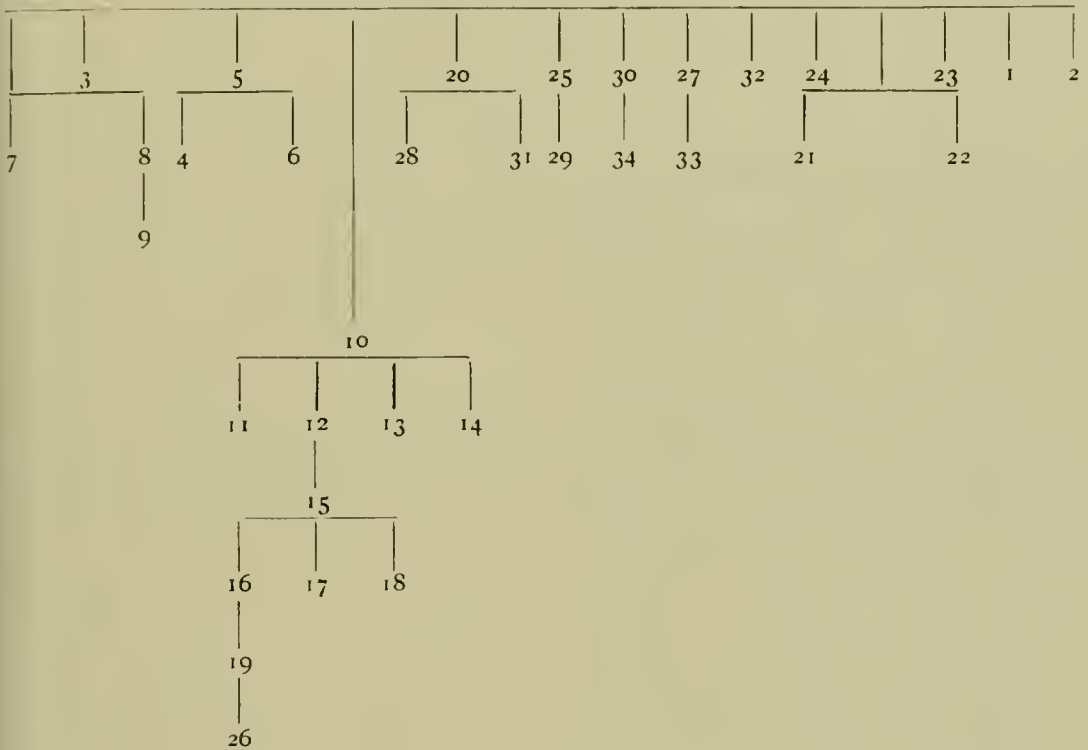
VACCINATION RETURNS, 1929.

Month	Births	Successfully Vaccinated	Exempted	Died Unvaccin- ated	Vaccination Postponed	Removed not traced	Removed traced	Unaccount- ed for	Insuscept- able
January ..	139	58	57	14	3	—	2	5	—
February ..	123	49	57	9	1	2	—	5	—
March ..	137	55	63	11	2	—	—	5	1
April ..	134	62	60	5	1	—	2	4	—
May ..	174	65	89	8	3	—	2	7	—
June ..	143	56	57	10	2	—	2	13	3
July ..	136	37	70	7	3	1	1	15	2
August ..	153	39	84	8	3	1	—	18	—
September ..	118	22	54	5	4	—	—	33	—
October ..	135	19	62	4	1	—	—	49	—
November ..	114	2	36	5	—	—	—	71	—
December ..	131	1	19	3	—	—	—	108	—
<b>TOTALS ..</b>	<b>1637</b>	<b>465</b>	<b>708</b>	<b>89</b>	<b>23</b>	<b>4</b>	<b>9</b>	<b>333</b>	<b>6</b>

From the above Table it will be noted that of 1,637 children born during the year only 465, or 28·5%, were successfully vaccinated, and exemptions were successfully claimed in respect of 708 children, or 60·8% of those born.

Thirty-four cases of small-pox, with one exception of a mild type, were notified during the year. As will be seen from the appended genealogical tree, the cases were on the whole sporadic, and their grouping suggested the presence of an unrecognised case, or cases, in or near the Borough.

#### SOURCE OF INFECTION NOT ASCERTAINED.



The majority of the cases (with the exception of known contacts who subsequently contracted the disease) were ascertained as a result of local inquiries and house-to-house visits undertaken in infected districts. In view of the apathetic, and sometimes obstructive, attitude of many of the patients and their friends, administrative control was a matter of difficulty. In the case of one infected household right of entry, for the purpose of examining a suspected secondary case, was refused. Entry was granted after the guardian of the case was informed that application would be made under Section 77 of the Blackburn Corporation Act, 1929, to a Justice of the Peace, for a warrant to enter the premises.

Cases 10, 11, 12, 13 and 14 in the appended Table were illustrative of parental apathy. These cases occurred in one household, case 9 had been ill for 22 and the remainder for 14 days before they were brought to the notice of the Department by a private practitioner called to the house for reasons unconnected with these cases. Four of these cases attended a school in the Mill Hill district which I immediately visited and discovered four further cases in actual attendance and two cases amongst absentees.

Case 27 of the series further illustrated the lack of responsibility exhibited by some of the sufferers. This case was that of a well-educated man, whom I visited as the result of chance information. Ten days prior to my visit he had sickened with a sharp attack of "influenza," followed a few days later by a rash. I found him to be suffering from well-marked small-pox, with a copious eruption.

No action under Section 126 of the Public Health Act, 1875, was taken in respect of any of these cases by reason of difficulty in establishing that the exposure was wilful.



TABLE 38.

Case	Sex	Age	Vaccinal Condition	DATE OF		
				Onset	Rash	Removal to Hospital.
1	M.	20	0	26/12/28	31/12/28	2/1/29
2	M	53	Infancy	31/12/28	4/1/29	6/1/29
3	M	12	0	7/2/29	11/2/29	14/2/29
4	M	11	0	8/2/29	12/2/29	18/2/29
5	M.	8	0	24/1/29	26/1/29	18/2/29
6	M.	55	Infancy	10/2/29	14/2/29	18/2/29
7	M.	13	0	20/2/29	24/2/29	26/2/29
8	F.	20	0	27/2/29	3/3/29	3/3/29
9	F.	21	0	18/3/29	22/3/29	22/3/29
10	F.	9	0	End of	March	19/4/29
11	F.	2	0	6/4/29	?	19/4/29
12	M.	4	0	6/4/29	?	19/4/29
13	M.	6	0	6/4/29	?	19/4/29
14	M.	11	0	6/4/29	?	19/4/29
15	F.	14	0	11/4/29	15/4/29	19/4/29
16	F.	50	Infancy	30/4/29	4/5/29	6/5/29
17	F.	18	0	29/4/29	3/5/29	7/5/29
18	M.	9	0	1/5/29	7/5/29	10/5/29
19	F.	11	0	8/5/29	12/5/29	14/5/29
20	F.	20	0	9/5/29	11/5/29	12/5/29
21	M.	8	0	8/5/29	11/5/29	16/5/29
22	F.	13	0	8/5/29	13/5/29	15/5/29
23	M.	12	0	10/5/29	14/5/29	15/5/29
24	M.	8	0	13/5/29	17/5/29	18/5/29
25	F.	9	0	14/5/29	18/5/29	20/5/29
26	F.	41	Infancy	26/5/29	30/5/29	30/5/29
27	M.	31	0	21/5/29	25/5/29	1/6/29
28	F.	14	0	30/5/29	3/6/29	3/6/29
29	F.	8	0	31/5/29	3/6/29	5/6/29
30	M.	6	0	29/5/29	3/6/29	3/6/29
31	F.	13	0	31/5/29	5/6/29	5/6/29
32	F.	14	0	1/6/29	6/6/29	7/6/29
33	M.	23	Infancy	6/6/29	10/6/29	10/6/29
34	F.	4	0	13/6/29	17/6/29	17/6/29

Of the above, history of contact with a previous case was established before onset only in respect of cases 8, 9, 26, 28, 30, 31, 33 and 34. These cases had been kept under observation and were removed to hospital immediately following the appearance of definite signs of small-pox. The remaining cases were discovered either through information received from private practitioners, neighbours or visits to infected schools.

The appended Table illustrates the vaccinal condition of the cases.

AGE	NO OF CASES	VACCINAL CONDITION
0—15	24	All Unvaccinated.
15—25	5	4 Unvaccinated, 1 Vaccinated in Infancy.
25—35	1	Unvaccinated.
35 +	4	All Vaccinated in Infancy.

### ADMINISTRATIVE AND PREVENTIVE MEASURES.

The procedure laid down in Memorandum 71A was strictly observed, with the proviso that observation of contacts was carried out for 21, and not for 16 days, as advised in this Memorandum. During 1928 observation was carried out for 18 days, but case ii of the series, a contact of a case notified in 1928, sickened of small-pox 19 days after the date of last exposure to infection. As it was feared that further cases might be missed owing to an unduly prolonged incubation, the period of observation was extended to 21 days.

During the year a total of 1,239 contacts were under observation.

As regards specific prevention of small-pox the strongest weapon of defence is vaccination. The prevalent type of small-pox is, happily, of a mild type, and in consequence many contacts argue that it is preferable to chance contracting a disease with little associated discomfort and mortality, than submit to vaccination with its resultant discomfort and malaise.

There would be some justification for this attitude were we assured that small-pox would retain its present mild characteristics. Until such an assurance is forthcoming, the existing preventive measures, including that of vaccination, are to be warmly advocated.

### PUBLIC HEALTH (SMALLPOX PREVENTION) REGULATIONS.

During the year 634 contacts were vaccinated by Medical Officers of the Department. Two hundred and thirty-seven of the vaccinations were primary, and 397 were revaccinations.

### ENTERIC FEVER.

Six cases of enteric fever were notified and four removed to the Corporation Hospital.

### PUBLIC HEALTH (INFECTIOUS DISEASES) REGULATIONS, 1927.

Three hundred and five cases of acute primary and acute influenzal pneumonia were notified in 1929, compared with 220 in 1928. Thirty-two of these cases terminated fatally, which represents a case mortality of 10·5%, compared with 16·6% in 1928.

No notifications were received in respect of Malaria or Dysentery.

### MEASLES.

This disease is not notifiable under the Infectious Diseases (Notification) Act.

Two hundred and forty-two cases were brought to the notice of the Public Health Department by parents and teachers. The cases notified in previous years were : 67 in 1928, 1,272 in 1927, 619 in 1926, 919 in 1925, 927 in 1924, 427 in 1923, and 1,688 in 1922.

No deaths from Measles occurred during the year.

### WHOOPING COUGH.

This disease is not notifiable. Such cases as are brought to the notice of the Health Department have been ascertained through the agency of teachers, school attendance officers, and the Maternity and Child Welfare Centres. The number of cases (102) was much lower than in 1928, when 330 cases were notified ; eight deaths occurred from this cause, a case mortality rate of 7·8%, compared with 1·2% in 1928.

### DIARRHŒA.

This disease is notifiable in Blackburn between July 1st and October 31st of each year, notification being required in respect of children under two years of age. Only six cases were notified during the year.

Diarrhœa was certified as the cause of eight deaths, being the same number as occurred in 1928.

Four of the deaths were in respect of infants under one year of age, three occurred in the 2-5 age group, and one in the 15-25 age group.

The death rate per 1,000 births for the age group under one year was 3·21 ; the corresponding figure in 1928 was 2·31, and in 1927 2·05.

The Diarrhœa death rate for Blackburn per 1,000 births for children under two years of age was 3·21. This figure must be considered satisfactory as the corresponding figure for England and Wales was 8·1 and for the 107 large towns 10·9.

### CHICKEN-POX.

In view of the occurrence of smallpox in the Borough the Infectious Disease (Notification) Act, 1889, was extended to include chicken-pox, by order of the Town Council, and with the approval of the Minister of Health, from the beginning of the year to 30th September, 1929.

During these periods 706 cases were notified, 259 by doctors, and 447 by parents, school teachers, etc.

The total number of cases brought to the notice of the Health Department was 706.

### ANTHRAX.

No cases of human anthrax occurred in Blackburn during the year.

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## CORPORATION HOSPITAL.

There are 120 beds at the Corporation Hospital, which are allotted as follows :—

Scarlet Fever	...	...	...	...	...	30	beds.
Diphtheria	...	...	...	...	...	16	,,
Tuberculosis...	...	...	...	...	...	34	,,
Other Infectious Diseases	...	...	...	...	...	10	,,
Ward V.	...	...	...	...	...	30	,,

Until July 11th Ward V was used as a Day and Residential Open-Air School, the Residential Section being occupied by 20 tubercular children. Owing to the heavy prevalence of scarlet fever the Ward ceased to be used as a Residential School on that date and reverted to its original purpose, that of a scarlet fever ward. When empty of scarlet fever it is proposed to use the Ward as a Sanatorium block, whereby 30 extra beds for the treatment of tuberculosis will be available.

Although the accommodation at the Hospital is sufficient to meet the ordinary requirements of the Borough, provision of further isolation cubicles would render the hospital more elastic and capable of dealing with a wider variety of infectious diseases than is now possible. The Committee has now authorised the addition of four cubicles to Ward III, which will be erected during the course of the summer.

The lack of isolation cubicles was acutely felt at the latter end of the year, when scarlet fever, diphtheria and measles were very prevalent. At this period both scarlet fever and diphtheria wards were full to capacity, and sometimes overfull, and all the side wards and isolation cubicles occupied. The position was complicated by children, admitted with scarlet fever or diphtheria, who developed measles, contracted prior to admission, after a few days stay in hospital. It is true that in an uncrowded ward cases of different infections can be nursed with safety at one and the same time by means of bed isolation. If, however, a ward be crowded, bed isolation is not to be regarded as devoid of risk, in fact, it becomes a somewhat dangerous, and certainly anxious, procedure. The provision of the extra cubicles will do much to facilitate the nursing and medical administration of the hospital.

During the year 830 patients were admitted and discharged, and a total of 976 patients were actually admitted.

Accrington Borough, Rishton U.D.C., Oswaldtwistle U.D.C. and Blackburn R.D.C. have made arrangements with the Blackburn Corporation whereby cases of infectious disease occurring within their districts may be received into the Corporation Hospital.



TABLE 39.

## Corporation Hospital.

	Patients remaining in Hospital on January 1st, 1929.				Patients admitted and Discharged in 1929.				Patients remaining in Hospital on December 31st, 1929				Analysis of all cases admitted in 1929 whether discharged or not during the year.					Average number of beds occupied during 1929	Cases removed expressed as a percentage of total notified
	Total covered	Re- covered	Died	Total	Re- covered	Died	Total	Re- covered	Died	Total	Re- covered	Died	Total	Re- covered	Died	Case Mor- tality %	Av. No of days in Hosp'l		
Scarlet Fever ..	26	26	—	566	564	2	91	91	—	657	655	2	657	655	2	0.30	34.40	61.9	83.3
Diphtheria ..	19	19	—	165	148	17	22	22	—	187	170	17	187	170	17	9.09	34.06	17.4	88.8
Enteric Fever ..	—	—	—	5	4	1	—	—	—	5	4	1	5	4	1	20.00	33.60	0.4	66.6
Measles ..	—	—	—	1	1	—	1	1	—	2	2	—	2	2	—	0.00	16.50	0.09	—
Erysipelas ..	—	—	—	8	8	—	—	—	—	8	8	—	8	8	—	0.00	23.50	0.5	12.3
Tuberculosis ..	32	15	8	56	38	18	32	12	1	88	50	19	88	50	19	22.72	128.70	32.0	—
Chicken Pox ..	1	1	—	4	4	—	—	—	—	4	4	—	4	4	—	0.00	19.00	0.2	—
Other Diseases ..	—	—	—	9	7	2	—	—	—	9	7	2	9	7	2	22.22	17.44	0.4	—
Pre-Tubercular and Delicate Children ..	19	19	—	12	12	—	—	—	—	12	12	—	12	12	—	0.00	114.80	18.5	—
Puerperal Fever ..	—	—	—	3	3	—	—	—	—	3	3	—	3	3	—	0.00	34.43	0.3	22.2
Puerperal Pyrexia ..	—	—	—	1	1	—	—	—	—	1	1	—	1	1	—	0.00	12.00	0.03	6.2
TOTALS ..	97	80	8	830	790	40	146	126	1	976	916	41	976	916	41	4.20	47.71	127.6	—



## SCARLET FEVER.

Although the number of cases of scarlet fever, 657, admitted to hospital was unduly high, only two deaths, a case mortality rate of 0·30%, occurred. Since March the majority of toxic cases and those admitted before the third day of the disease received anti-toxin as a routine. The number of cases treated with anti-toxin (405) and control cases (252) who received no anti-toxin have been analysed qua complications, and the increased complication rate in the non-anti-toxin cases, as compared with the anti-toxin cases, has justified the administration of anti-toxin to all cases admitted.

Apart from the diminished complication rate amongst anti-toxin, as compared with non-anti-toxin cases, it was observed with reference to the anti-toxin cases :—

- (1) That the temperature falls rapidly. In the majority of cases the temperature reached normal within 12–24 hours of the administration of anti-toxin.
- (2) The rash fades rapidly.
- (3) There is an early abatement of malaise and general symptoms.
- (4) Desquamation was delayed.

## ANALYSIS OF SCARLET FEVER ANTI-TOXIN CASES, 1929.

Day of Disease of Administration of Antitoxin	Total Cases.	AGE GROUPS (YEARS).					COMPLICATIONS.												
							Serum Rash	Septic Sores	Rheumatism	Cardiac Irreg.	Adenitis	Nephritis	Rhinorrhœa	Otorrhœa	Pneumonia	T'sitis	Gastritis	Ethmoiditis	Total
		0-5	5-10	10-15	15-20	20+													
1	15	6	7	2	—	—	2	1	—	2	1	—	1	—	—	—	—	—	7
2	105	22	48	20	10	5	12	6	1	7	11	2	2	3	—	—	—	—	44
3	128	16	65	21	13	13	18	13	2	7	10	5	—	3	—	1	—	—	59
4	92	12	41	21	10	8	13	4	2	3	3	3	—	1	—	2	1	1	33
5	36	4	10	11	2	9	7	7	—	2	2	3	1	2	2	—	—	—	26
6	16	5	3	2	1	5	2	1	—	—	2	1	—	—	—	—	—	—	6
7+	13	2	5	2	1	3	—	1	1	—	2	2	—	4	—	—	—	—	10
	405	67	179	79	37	43	54	33	6	21	31	16	4	13	2	3	1	1	185

From the above Table it will be noted that the total number of complications was 185, a complication rate of 45·6 per 100 cases. If serum rashes and septic sores, which cannot strictly be described as complications, be subtracted, the number of complications falls to 98, equivalent to a rate of 24·19 per 100 cases.

The appended Table analyses 252 cases admitted to Hospital which were not treated by anti-toxin.

It will be noted that 112 of these cases, or 44·4%, were complicated. To make this complication rate comparable with that of the anti-toxin group, it is necessary to subtract the percentage (10·3) suffering from septic sores. This gives a corrected complication rate of 34·1 in respect of non-anti-toxin cases, as compared with a corrected rate (*i.e.*, the rate after subtraction of septic sores and serum rashes) of 24·19 in respect of anti-toxin cases.

#### NON-ANTI-TOXIN CASES, 1929.

Day of Disease on Admission.	No. of Cases.	AGE GROUPS.					COMPLICATIONS.												
							Otorrhea	Rhinorrhea	Septic Sores	Albumen with N.	Adenitis	Rheumatism	Cardiac Irreg.	Enteritis	Tisitis	Vaginitis	Pneumonia	Died	Total
		0-5	5-10	10-15	15-20	20+													
1	5	—	3	—	—	2	—	—	2	—	1	—	1	—	—	—	—	—	4
2	39	10	22	4	2	1	3	—	2	3	5	—	2	—	—	—	—	1	16
3	63	10	28	17	3	5	11	3	7	2	5	1	2	2	1	1	1	—	36
4	49	13	25	6	4	1	1	2	5	2	5	—	2	—	—	1	—	—	18
5	43	6	18	8	5	6	3	4	4	1	1	2	—	—	1	—	—	—	16
6	13	3	4	3	1	2	—	—	2	—	2	1	1	—	—	—	—	—	6
7+	40	6	26	3	2	3	2	1	4	2	3	—	1	2	1	—	—	—	16
	252	48	126	41	17	20	20	10	26	10	22	4	9	4	3	2	1	1	112

The following Table gives the ages and sexes of the patients admitted :—

TABLE 40.

Ages.	Males.	Females.	Totals.	Deaths.
0— 1 years .	1	2	3	—
1— 2 „ ..	3	4	7	—
2— 3 „ ..	17	11	28	—
3— 4 „ ..	14	7	21	1
4— 5 „ ..	22	27	49	—
5—10 „ ..	147	171	318	—
10—15 „ ..	66	65	131	—
15—25 „ ..	33	40	73	1
25—35 „ ..	8	14	22	—
35—45 „ ..	1	2	3	—
45 and over ..	1	1	2	—
Total, 1929 ..	313	344	757	2
Total, 1928 ..	65	51	116	—
Total, 1927 ..	54	62	116	1
Total, 1926 ..	80	112	192	2
Total, 1925 ..	118	141	259	3

The following Table shows the percentage of Scarlet Fever removals in Wards, 1929 :—

**TABLE 41.**

<i>Ward.</i>						1929 <i>Percentage</i>	1928 <i>Percentage.</i>
St. Stephen's .. .. .	..	..	..	..	..	74·0	100·0
Trinity .. .. .	..	..	..	..	..	85·5	87·5
St. Michael's .. .. .	..	..	..	..	..	66·6	92·8
St. John's .. .. .	..	..	..	..	..	97·7	90·0
St. Silas's .. .. .	..	..	..	..	..	84·6	77·7
St. Paul's .. .. .	..	..	..	..	..	78·5	80·0
St. Peter's.. .. .	..	..	..	..	..	100·0	100·0
St. Mary's .. .. .	..	..	..	..	..	88·6	100·0
St. Matthew's .. .. .	..	..	..	..	..	86·7	100·0
St. Thomas's .. .. .	..	..	..	..	..	93·2	81·8
Park .. .. .	..	..	..	..	..	67·3	66·6
St. Luke's .. .. .	..	..	..	..	..	76·2	100·0
St. Mark's .. .. .	..	..	..	..	..	81·4	77·7
St. Andrew's .. .. .	..	..	..	..	..	83·3	66·6
<b>TOTAL</b> .. .. .	..	..	..	..	..	83·3	85·9

Monthly Admissions of Scarlet Fever Cases to the Corporation Hospital during 1929 :—

**TABLE 42.**

1929.

1928.

<i>Month.</i>	<i>Cases Notified.</i>	<i>Cases Removed.</i>	<i>Percentage of Removals.</i>	<i>Cases Notified.</i>	<i>Percentage of Removals.</i>
January.. .. .	22	19	86·3	5	100·0
February .. .. .	24	19	79·1	9	77·7
March .. .. .	18	15	83·3	5	80·0
April .. .. .	25	18	72·0	12	91·6
May .. .. .	27	24	88·8	6	100·0
June .. .. .	22	22	100·0	2	100·0
July .. .. .	64	51	79·6	5	100·0
August .. .. .	54	50	92·6	3	33·3
September .. .. .	106	94	88·6	11	100·0
October .. .. .	172	137	79·6	17	88·2
November .. .. .	103	88	85·4	20	75·0
December .. .. .	124	97	78·2	26	84·7
<b>TOTAL</b> .. .. .	761	634	83·3	121	85·9

## DIPHTHERIA.

One hundred and eighty-seven cases, of which 12 were from outside the Borough, were admitted to Hospital during 1929. Seven of these cases proved not to be diphtheria. The negative cases were five of Follicular Tonsillitis, and two of septic sore throat.

Fifteen of the cases admitted were suffering from laryngeal diphtheria, and tracheotomy was performed on five of them. Three of these cases recovered, whilst two, who were profoundly toxic, died.

The following complications and sequelæ occurred among the diphtheria patients :—

Paralysis (1) Palatal	...	...	...	...	...	9
(2) Foot-drop	...	...	...	...	...	3
(3) Ocular	...	...	...	...	...	3
(4) Facial	...	...	...	...	...	1
Disordered Action of the Heart	...	...	...	...	...	11
Albuminuria	...	...	...	...	...	3
Rheumatism...	...	...	...	...	...	2
Adenitis	...	...	...	...	...	5
Otorrhœa	...	...	...	...	...	2
Conjunctivitis	...	...	...	...	...	1
Ethmoiditis	...	...	...	...	...	1
Serum Rashes	...	...	...	...	...	23
						—
						64
						—

TABLE 43.

## INCIDENCE OF DIPHTHERIA CASES ADMITTED TO HOSPITAL.

<i>Ages.</i>	<i>Males.</i>	<i>Females.</i>	<i>Totals.</i>	<i>Deaths.</i>
Under 1 year.. ..	—	—	—	—
1—2 years .. ..	2	2	4	—
2—3 years .. ..	3	6	9	—
3—4 years.. ..	5	6	11	3
4—5 years.. ..	7	11	18	1
5—10 years.. ..	33	48	81	11
10—15 years.. ..	12	14	26	2
15—25 years.. ..	9	12	21	—
25—35 years.. ..	4	9	13	—
35 years and over ..	1	3	4	—
TOTALS, 1929 .. ..	76	111	187	17
TOTALS, 1928 .. ..	54	74	128	13
TOTALS, 1927 .. ..	55	60	115	14
TOTALS, 1926 .. ..	42	48	90	9

The following Table shows the percentage of Diphtheria removals in Wards, 1929 :—

TABLE 44.

<i>Ward.</i>						1929 <i>Percentage.</i>	1928 <i>Percentage.</i>
St. Stephen's .. ..	..	..	..	..	..	70·0	50·0
Trinity .. ..	..	..	..	..	..	94·1	100·0
St. Michael's.. ..	..	..	..	..	..	90·9	88·8
St. John's .. ..	..	..	..	..	..	100·0	100·0
St. Silas's .. ..	..	..	..	..	..	66·6	55·5
St. Paul's .. ..	..	..	..	..	..	100·0	100·0
St. Peter's .. ..	..	..	..	..	..	100·0	100·0
St. Mary's .. ..	..	..	..	..	..	100·0	100·0
St. Matthew's .. ..	..	..	..	..	..	95·2	100·0
St. Thomas's .. ..	..	..	..	..	..	69·2	75·0
Park .. ..	..	..	..	..	..	86·9	100·0
St. Luke's .. ..	..	..	..	..	..	100·0	100·0
St. Mark's .. ..	..	..	..	..	..	88·8	88·8
St. Andrew's.. ..	..	..	..	..	..	94·1	50·0
TOTAL .. ..	..	..	..	..	..	88·8	89·5

TABLE 45.

The monthly incidence of Diphtheria in Blackburn was :—

<i>Month.</i>	<i>Cases Notified.</i>	<i>Cases Removed.</i>	<i>Percentage of Removals.</i>	1928.	
				<i>Cases Notified.</i>	<i>Percentage of Removals.</i>
January.. ..	25	23	92·0	11	100·0
February .. ..	27	24	88·8	7	100·0
March .. .. .	16	12	75·0	11	81·8
April .. .. .	14	14	100·0	10	90·0
May .. .. .	7	7	100·0	13	84·6
June .. .. .	17	15	88·2	9	100·0
July .. .. .	14	10	71·5	9	66·6
August .. .. .	18	13	88·8	4	100·0
September .. ..	7	7	100·0	5	100·0
October .. .. .	17	14	82·3	9	88·8
November .. ..	11	9	81·8	14	92·8
December .. ..	24	24	100·0	22	86·3
TOTAL .. ..	197	175	88·8	124	89·5

TABLE 46.

## ENTERIC FEVER.

<i>Age Period.</i>	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>	<i>Deaths.</i>
Under 10 years .. ..	—	—	—	—
10—15 years.. .. .	—	—	—	—
15—25 years.. .. .	—	—	—	—
25—35 years.. .. .	1	—	2	—
35—45 years.. .. .	1	—	2	—
45 and upwards .. ..	1	—	1	—
TOTAL.. .. .	3	2	5	—



## OTHER DISEASES.

TABLE 47.

## AGE PERIODS.

<i>Disease.</i>	0—1		1—2		2—5		5—15		15—25		25—35		35—45		45 & up		Total	Deaths
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		
Encephalitis																		
Lethargica .. ..	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	2	1
Chickenpox .. ..	—	—	—	—	2	—	—	2	—	—	—	—	—	—	—	—	4	—
Puerperal Fever ..	—	—	—	—	—	—	—	—	—	2	—	1	—	—	—	—	3	—
Puerperal Pyrexia ..	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	—
Erysipelas .. ..	—	—	—	—	—	—	—	—	—	—	1	—	2	—	3	2	8	—
Pneumonia .. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ophthalmia																		
Neonatorum .. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles .. ..	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	2	—
Marasmus .. ..	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping Cough ..	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—
Meningitis .. ..	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1	1
No Disease .. ..	4	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4	—
Other Diseases ..	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1	—
	5	4	—	—	2	1	—	3	1	3	2	2	2	—	3	3	27	2

TABLE 48.

## OUT OF BOROUGH CASES.

<i>Disease.</i>	<i>Males.</i>	<i>Females.</i>	<i>Total.</i>	<i>Deaths.</i>
Scarlet Fever.. ..	7	16	23	1
Diphtheria .. ..	8	4	12	1
Enteric Fever .. ..	—	1	1	1
Erysipelas .. ..	—	1	1	—
Other Diseases .. ..	1	—	2	—
Encephalitis Lethargica	1	—	1	—
Puerperal Fever .. ..	—	1	1	—
Chickenpox .. ..	1	—	1	—
TOTAL .. ..	18	24	42	3

TABLE 49.

## ADMISSIONS FROM THE BLACKBURN ROYAL INFIRMARY.

<i>Disease.</i>	<i>Male.</i>	<i>Female</i>	<i>Total</i>	<i>Deaths</i>
Scarlet Fever ... ..	4	5	9	—
Encephalitis Leth. ...	1	—	1	—
Chicken Pox ... ..	2	—	2	—
TOTAL ... ..	7	5	12	—

## ADMISSIONS FROM QUEEN'S PARK HOSPITAL.

<i>Disease</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Deaths</i>
Scarlet Fever ... ..	3	5	8	—
Diphtheria ... ..	4	4	8	1
Chicken Pox ... ..	—	1	1	—
Erysipelas ... ..	—	1	1	—
Other Diseases ... ..	—	1	1	—
TOTAL ... ..	7	12	19	1

## ADMISSIONS FROM THE COTTAGE HOMES.

<i>Disease</i>	<i>Males</i>	<i>Females</i>	<i>Total</i>	<i>Deaths</i>
Scarlet Fever ... ..	2	3	5	—
TOTAL ... ..	2	3	5	—

Cases from the Blackburn and East Lancashire Royal Infirmary and Queen's Park Hospital are included in the Out-of-the-Borough Table, if the cases sent were not residents of Blackburn.

## BACTERIOLOGICAL EXAMINATIONS.

## I.—AT THE CORPORATION HOSPITAL.

TABLE 50.

<i>Examination and Material.</i>	1929			1928	
	<i>Positive</i>	<i>Negative</i>	<i>Total</i>	<i>Total</i>	
For Diphthoria Bacilli :—					
<i>Swabs—</i>					
Private Practitioners ... ..	87	...	383	...	470
Hospital ... ..	59	...	301	...	360
S.M.O. ... ..	0	...	6	...	6
Other ... ..	0	...	1	...	1
For Tubercle Bacilli :—					
<i>Sputum—</i>					
Private Practitioners ... ..	50	...	170	...	220
Hospital ... ..	276	...	99	...	375
Tuberculosis Dispensary ...	54	...	142	...	196
<i>Pus—</i>					
Hospital ... ..	0	...	0	...	0
For Ringworm :—					
Private Practitioners ... ..	2	...	1	...	3
School Medical Service ...	89	...	262	...	351
Examination of Urine ( <i>Pus, etc.</i> ):—					
Private Practitioners ... ..	0	...	0	...	0
Hospital ... ..	326	...	629	...	955
Tuberculosis Dispensary ...	0	...	0	...	0
Pleural Fluid .. ..	0	...	1	...	1
Totals ... ..	943	...	1995	...	2938

2667



*PART V.*

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Prevalence and Control  
*of*  
Tuberculosis.

## TUBERCULOSIS.

## INCIDENCE AND MORTALITY.

During the year 155 cases of Tuberculosis, 125 Pulmonary and 30 Non-Pulmonary, were notified. In 1928 the notifications numbered 142 ; in 1927, 151 ; in 1926, 176 ; in 1925, 240 ; in 1924, 150 ; in 1923, 176 ; and in 1922, 145. The notification of Tuberculosis in the area has been fairly satisfactory, and there have been no cases of wilful neglect or refusal to notify.

The number of deaths in 1929 from all forms of Tuberculosis was 127 ; Pulmonary Tuberculosis caused 114 deaths, and Non-Pulmonary Tuberculosis 13. Twenty-three, or 18·9%, of the deaths from Tuberculosis were in respect of cases which had not been notified during life.

## RECORDS OF PREVIOUS YEARS.

<i>Deaths from Tuberculosis</i>	1929	1928	1927	1926	1925	1924	1923	1922
Pulmonary ... ..	114	82	96	105	90	85	93	96
Non-Pulmonary ... ..	13	21	14	10	20	26	31	26

The number of deaths from all forms of Tuberculosis is equivalent to a rate of 1·01 deaths per 1,000 living.

## MORTALITY RATE PER 1,000 LIVING COMPARED WITH THAT OF ENGLAND AND WALES.

	1929	1928	1927	1926	1925	1924	1923	1922	1921	1920	1919
Blackburn...	1·01	0·82	0·88	0·93	0·86	0·86	0·96	0·81	0·78	0·81	1·13
England & Wales...	—	0·93	0·97	0·96	1·04	1·06	1·03	1·12	1·13	1·13	1·69

Perusal of the above Table shows that the death rate from all forms of Tuberculosis in Blackburn compares favourably with the corresponding rate for England and Wales. Since 1919, however, there has been a decline in the England and Wales rate, whereas that of Blackburn has, until 1929, remained practically stationary since 1920.

Of the cases notified during the year 57 died, 51 of the deaths being from Pulmonary, and six from Non-Pulmonary disease.



The appended Table gives the age-groups of the cases notified and of the deaths for the year 1929.

TABLE 51.

Age Periods.	New Cases				Deaths.			
	Pulmonary		Non-Pulmonary.		Pulmonary.		Non-Pulmonary.	
	M.	F.	M.	F.	M.	F.	M.	F.
Under one year ... ..	—	—	—	1	—	—	—	2
1— 5 years ... ..	—	—	2	1	1	2	1	1
5—10 „ ... ..	—	2	1	2	—	1	—	—
10—15 „ ... ..	1	—	—	3	—	1	—	—
15—20 „ ... ..	3	8	2	2	5	3	1	2
20—25 „ ... ..	10	14	5	2	8	15	2	1
25—35 „ ... ..	9	15	1	—	5	19	1	—
35—45 „ ... ..	13	14	—	—	8	7	—	—
45—55 „ ... ..	9	4	1	1	16	3	—	1
55—65 „ ... ..	12	3	4	2	12	4	1	—
65 and upwards ... ..	7	1	—	—	4	—	—	—
Totals ... ..	64	61	16	14	59	55	6	7

The number of cases notified during the year and the number of deaths from this cause are practically the same for either sex.

Of cases notified during the year, the attack rate corresponds, in the case of males, to 1·05 per 1,000 males, and of females, to 1·09 per 1,000 females.

### THE TUBERCULOSIS SCHEME.

The Council have provided a Tuberculosis Dispensary in Duke Street, where afternoon sessions are held from 2-0 to 5-0 p.m., on Monday, Tuesday, Thursday and Friday. For the convenience of those whose occupation prevents attendance at the afternoon consultations a Clinic is held every Tuesday evening, from 7-0 to 9-0 p.m. The Clinical Tuberculosis Officer, assisted by the Tuberculosis Nurse and Clerk, attends each session.

The success of a Tuberculosis Scheme depends upon its co-ordination with other branches of the Health Department, with the School Medical Service, with all Hospitals in the district, with the Medical Profession, and especially that section of the medical profession engaged in insurance practice. To secure the maximum co-ordination the Clinical Tuberculosis Officer holds office as Deputy Medical Officer of Health and Deputy School Medical Officer. He is consequently in intimate touch with both Health and School Medical Departments, and can thus correlate their activities with those of the Tuberculosis Scheme.

As regards co-operation with general practitioners, 135 cases have been sent by practitioners for examination at the Dispensary, and the Tuberculosis Officer has held 166 consultations with practitioners.

Following examination at the Dispensary the majority of insured patients are referred to their panel doctors for domiciliary treatment. Each quarter the practitioners are requested to send their patients to the Dispensary, or to furnish the Administrative Tuberculosis Officer with a progress report.

In addition to a clinical examination all cases attending the Dispensary for the first time undergo X-Ray examination and bacteriological investigation of the sputum is also performed. During the year 220 sputum examinations were undertaken for private practitioners, and 376 in respect of patients attending the Dispensary.

A new X-Ray apparatus installed at the Health Department is used in connection with the Tuberculosis Scheme in place of the one at the Corporation Hospital, which, having become unreliable by reason of age, gave unsatisfactory results.

The Tuberculosis Nurse visits the homes of all notified cases and reports on home conditions, in addition, she advises all contacts to attend the Dispensary for examination.

During the year the Nurse made 2,194 home visits, 565 of which were in respect of ex-Service men.

Probably the most important duty of the Tuberculosis Nurse is to supervise home isolation of patients under domiciliary treatment. Unfortunately the housing conditions of many of these cases are such as render satisfactory home isolation a matter of grave difficulty.

The appended Table, which relates to persons who were at home during the last quarter of 1929, demonstrates the difficulty experienced in securing isolation of this type of case :—

TABLE 52.

	On First Visit.	After- wards.
No. who occupy a separate bedroom .. .. .	140	190
No. who occupy a separate parlour alone .. .. .	20	30
No. who occupied a kitchen alone .. .. .	18	18
No. who occupied a shelter in yard .. .. .	...	..
No. who occupied a separate bed in a room occupied by :—		
One other person .. .. .	31	31
Two other persons .. .. .	38	4
Three other persons .. .. .	4	6
Many other persons (Common Lodging House, &c.) ..	...	...
No. who occupied a bed in common with :—		
One other person .. .. .	13	7
Two other persons .. .. .	20	9
Three other persons .. .. .	7	5
Two beds in a room :—		
Two persons in each bed .. .. .	46	40
Three persons in each bed .. .. .	...	...
<b>TOTAL</b> .. .. .	<b>340</b>	<b>340</b>

By arrangement with the District Nursing Association, the Corporation provides home nursing for selected cases of patients under domiciliary treatment. During the year members of the District Nursing Staff paid 1,544 visits under this arrangement.

#### THE TREATMENT OF TUBERCULOSIS.

At the beginning of 1929 there were 442 Pulmonary and 249 Non-Pulmonary cases on the Dispensary Register.

During the year 127 Pulmonary and 31 Non-Pulmonary cases were added to the Register, consequently 569 Pulmonary, and 280 Non-Pulmonary cases were dealt with during the year. At the end of the year there were 447 Pulmonary, and 252 Non-Pulmonary cases on the Register, 150 names having been removed in the course of the year by reason of cure (1), died of Tuberculosis (97), lost sight of (38), died of non-tubercular disease (5), and removed to other towns (10).

Of cases on the Register on December 31st, 1929, 56 were receiving no form of treatment. The majority of these were following their ordinary occupations.

Blaekburn patients are admitted either to the Sanatorium Block at the Corporation Hospital, or to Meathop Sanatorium, Grange-over-Sands, where the Corporation reserves ten beds. The more advanced cases are received into the Corporation Hospital, the early cases, or those which have improved under treatment at the Corporation Hospital, are drafted to Meathop.

At the beginning of the year 19 males, 7 females, and six children were in-patients in the Sanatorium block; during the year 25 males, 26 females, and five children were admitted; on December 31st, 1929, 18 males, 10 females, and 4 children were still undergoing treatment. In the course of the year 26 males, 23 females, and 7 children were discharged.

The Residential Open-Air School in the Corporation Hospital grounds forms part of the scheme for the treatment of Tuberculosis in children of school-age. At the commencement of the year 19 children were in residence; in the course of the year 12 children were admitted; 31 discharged.

The undue prevalence of Scarlet Fever necessitated closure of the Residential Open-Air School in July, when the School reverted to its original purpose, that of a scarlet fever ward. When empty of scarlet fever cases it is proposed, subject to the approval of the Ministry of Health, to utilise this ward for the reception of cases of tuberculosis, whereby the number of available sanatorium beds will be increased by 30.

The appended Table shows the condition of patients on discharge from the Sanatorium Block and Residential School:—

				<i>Disease</i> <i>Quiescent</i>		<i>Much</i> <i>Improved</i>	<i>No Change</i>		<i>Dead</i>	
Males	...	...	...	—	...	9	...	5	...	12
Females	...	...	...	1	...	10	...	5	...	7
Children	...	...	...	—	...	35	...	3	...	—
				—	...	—	...	—	...	—
				1	...	54	...	13	...	19
				—	...	—	...	—	...	—

At the commencement of the year 5 males and 4 females were in-patients at Meathop Sanatorium, and during 1929 8 males and 7 females were admitted. At the end of the year 6 males and 3 females remained at Meathop. The appended Table shows the condition of patients on discharge from Meathop.

				<i>Disease</i>	<i>Much</i>				
				<i>Quiescent</i>	<i>Improved</i>	<i>No Change</i>	<i>Dead</i>		
Males	...	...	...	2	...	1	...	4	0
Females	...	...	...	2	...	2	...	2	2
				—	—	—	—	—	—
				4	...	3	...	6	2
				—	—	—	—	—	—

### NON-PULMONARY TUBERCULOSIS.

During the year 13 deaths were certified to be due to Non-Pulmonary Tuberculosis, compared with 21 in 1928, 14 in 1927, 10 in 1926, 24 in 1925, 26 in 1924, 31 in 1923, and 26 in 1922. The deaths were due to :—

						<i>Male.</i>	<i>Female.</i>
Tuberculous Meningitis	..	..	..	..	..	1	3
Tuberculous Peritonitis	..	..	..	..	..	2	3
Tubercle of Kidney	..	..	..	..	..	2	0
Bone and Joint Tuberculosis..	..	..	..	..	..	1	1

Thirty cases of Non-Pulmonary Tuberculosis were notified. The diagnoses were :—

						<i>Male.</i>	<i>Female.</i>
Tuberculous Glands of Neck	..	..	..	..	..	1	2
Abdominal Tuberculosis	..	..	..	..	..	6	2
Meningitis	..	..	..	..	..	0	1
Spinal Caries	..	..	..	..	..	0	2
Tuberculous Joint Disease	..	..	..	..	..	2	4
Tuberculous Bone Disease	..	..	..	..	..	2	2
Mediastinal Glands	..	..	..	..	..	1	0
Larynx	..	..	..	..	..	2	0
Tuberculous Kidney	..	..	..	..	..	1	0
Tuberculous Intestine	..	..	..	..	..	1	1

### BONE AND JOINT TUBERCULOSIS.

Nineteen cases of Bone or Joint Tuberculosis were examined by Dr. Briggs at the Special Orthopædic Clinic.



## DENTAL TREATMENT OF TUBERCULOSIS PATIENTS.

The following Table gives details of Dental work carried out as part of the Tuberculosis Scheme :—

The School Dentists carried out the following work in 1929 :—

Number of Patients	..	..	..	..	..	9
Permanent Teeth extracted	..	..	..	..	..	19
Temporary Teeth extracted	..	..	..	..	..	—
Scaling and Polishing	..	..	..	..	..	—
Number of Sessions held	..	..	..	..	..	5

The following treatment was carried out at Meathop Sanatorium by the Dental Surgeon attached to that Institution. The cost of this treatment was borne by the Health Committee, but in some cases a part of the expense was refunded by the patients :—

Number of Patients Treated	..	..	..	..	..	4
Extractions	..	..	..	..	..	22
Dentures :—						
Part	..	..	..	..	..	2
Full	..	..	..	..	..	1

## ULTRA-VIOLET LIGHT TREATMENT.

Particulars of the Ultra-Violet Light Treatment of Tuberculosis patients will be found in Tables 79 to 81.

## PUBLIC HEALTH (PREVENTION OF TUBERCULOSIS) REGULATIONS, 1925.

It was not necessary to take any action during the year under the above regulations relating to tuberculous employees in the milk trade.



TABLE 53.  
Public Health (Tuberculosis) Regulations, 1912.

## SUMMARY OF NOTIFICATIONS.

Age Periods.	Notifications on Form A.													Notifications on Form B				Number of Notifications on Form C.		
	Number of Primary Notifications													Number of Primary Notifications.				Total Notifications on Form B.	Poor Law Institutions.	Sanatoria.
	Total Primary Notifications													Total Primary Notifications						
	0 to 1	1 to 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 35	35 to 45	45 to 55	55 to 65	65 and upwards	Total Primary Notifications	Total Notifications on Form A.	Under 5	5 to 10	10 to 15	Total Primary Notifications			
Pulmonary Males ..	..	..	..	1	3	10	9	13	9	12	7	64	67	..	..	..	..	28	31	
„ Females...	..	..	2	..	8	14	15	14	4	3	1	61	62	..	..	..	..	8	34	
Non-Pulmonary Males ..	..	2	1	..	2	5	1	..	1	4	..	16	16	..	..	..	..	2	1	
„ Females ..	1	1	2	2	2	2	..	..	1	2	..	13	15	1	..	1	1	4	2	

## PUBLIC HEALTH (TUBERCULOSIS) REGULATIONS, 1924.

Number of cases of Tuberculosis remaining on the Register of Notifications kept by the Medical Officer of Health of the County Borough on the 31st December, 1929.

TOTAL CASES.	PULMONARY.			NON-PULMONARY.		
	Males	Females	Total.	Males	Females	Total
692	245	194	439	135	118	253

This shows a decrease of 24 in the total number ; which comprises a decrease of 31 pulmonary, and an increase of seven non-pulmonary.

TABLE 54. (FORM T. 53 OF THE MINISTRY OF HEALTH).

## TUBERCULOSIS DISPENSARY—WORK CARRIED OUT DURING THE YEAR 1929.

DIAGNOSIS.	PULMONARY.				NON-PULMONARY				TOTAL.			
	Adults		Children		Adults		Children		Adults		Children	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
A.—New Cases examined during the year (excluding contacts)—												
(a) Definitely tuberculous ..	24	29	3	3	4	2	3	5	28	31	6	8
(b) Doubtfully tuberculous.	—	—	—	—	—	—	—	—	20	12	8	4
(c) Non-tuberculous .. ..	—	—	—	—	—	—	—	—	25	20	11	13
B.—Contacts examined during the year—												
(a) Definitely tuberculous ..	—	—	—	—	—	—	—	1	—	—	—	1
(b) Doubtfully tuberculous.	—	—	—	—	—	—	—	—	—	1	1	2
(c) Non-tuberculous .. ..	—	—	—	—	—	—	—	—	5	9	5	12
C.—Cases written off the Dispensary Register as—												
(a) Cured .. .. .	—	—	—	—	1	—	—	—	1	—	—	—
(b) Diagnosis not confirmed or non-tuberculous (including cancellation of cases notified in error) ..	—	—	—	—	—	—	—	—	49	44	29	32
D.—Number of Persons on Dispensary Register on December 31st—												
(a) Diagnosis completed ..	198	155	24	18	51	41	52	52	249	196	76	70
(b) Diagnosis not completed	—	—	—	—	—	—	—	—	7	3	6	—

1. Number of persons on Dispensary Register on January 1st .. .. .	632
2. Number of Patients transferred from other areas and of "lost sight of" cases returned .. .. .	5
3. Number of Patients transferred to other areas and cases "lost sight of" ..	41
4. Died during the year .. .. .	56
5. Number of Observation Cases under A (b) and B (b) above in which period of observation exceeded two months .. .. .	5
6. Number of Attendances at the Dispensary (including Contacts) .. .. .	1616
7. Number of Attendances of Non-Pulmonary Cases at Orthopædic Out-stations for treatment or supervision .. .. .	98

8.	Number of Attendants, at General Hospitals or other Institutions approved for the purpose, of Patients for—	
	(a) "Light" treatment, carried out at the Corporation Hospital	717
	(b) Other special forms of Treatment .. .. .	—
9.	Number of Patients to whom Dental Treatment was given, at or in connection with the Dispensary .. .. .	—
10.	Number of Consultations with Medical Practitioners :—	
	(a) At Homes of Applicants .. .. .	24
	(b) Otherwise .. .. .	142
11.	Number of other Visits by Tuberculosis Officers to Homes .. .. .	35
12.	Number of Visits by Nurses or Health Visitors to Homes for Dispensary purposes .. .. .	3738
13.	Number of :—	
	(a) Specimens of Sputum, &c., examined .. .. .	376
	(b) X-Ray Examinations made in connection with Dispensary work .. .. .	408
14.	Number of Insured Persons on Dispensary Register on the 31st December ..	399
15.	Number of Insured Persons under Domiciliary Treatment on 31st December	186
16.	Number of Reports received during the year in respect of Insured Persons :—	
	(a) Form G.P. 17 .. .. .	—
	(b) Form G.P. 36 .. .. .	116
17.	Number of cases sent by Private Practitioners for an opinion .. .. .	135
18.	Number found to be suffering from Tuberculosis .. .. .	48

The work carried out during the year at the Dispensary has suffered through sickness and changes of the personnel. The work was interrupted particularly by the hiatus which elapsed between the resignation of Dr. Roe and the assumption of duties by his successor, Dr. MacLachlan.

**TABLE 55. (FORM T. 55 OF THE MINISTRY OF HEALTH)**  
**RESULTS OF TREATMENT.**

Classification. on admission to the Institution		Condition at time of Discharge.	Duration of Residential Treatment in the Institution.												To't
			Under 3 months.			3-6 months.			6-12 months.			More than 12 months.			
			M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
PULMONARY TUBERCULOSIS.	Class T.B. minus.	Quiescent .. .. .	...	...	...	...	1	...	...	...	...	...	...	...	1
		Improved .. .. .	...	1	...	1	...	1	...	2	1	...	...	...	6
		No material improve- ment .. .. .	...	1	...	2	...	...	...	...	1	...	...	...	4
		Died in Institution ..	...	...	...	...	...	...	1	...	...	...	...	...	1
	Class T.B. plus. Group 1.	Quiescent .. .. .	...	...	...	1	1	...	1	...	...	...	...	...	3
		Improved .. .. .	...	3	...	3	...	...	1	2	1	...	...	...	10
		No material improve- ment .. .. .	...	1	2	...	2	...	2	...	...	...	...	...	7
		Died in Institution ..	...	...	...	...	...	...	...	2	...	2	...	...	4
	Class T.B. plus. Group 2.	Quiescent .. .. .	...	...	...	...	1	...	...	...	...	...	...	...	1
		Improved .. .. .	...	1	...	...	1	...	2	1	...	1	...	...	6
		No material improve- ment .. .. .	1	...	...	...	...	...	2	...	...	...	...	...	3
		Died in Institution ..	4	2	...	...	...	...	1	...	...	1	...	...	8
	Class T.B. plus. Group 3.	Quiescent .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved .. .. .	...	...	...	...	...	...	...	1	...	...	...	...	1
		No material improve- ment .. .. .	...	...	...	...	2	...	1	1	...	...	...	...	4
		Died in Institution ..	2	3	...	...	1	...	...	...	...	1	1	...	8
NON-PULMONARY TUBERCULOSIS.	Bones and Joints.	Quiescent or Arrested.	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...
		No material improve- ment .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Abdominal	Quiescent or Arrested.	...	...	...	...	...	...	...	...	1	...	...	...	...
		Improved .. .. .	...	...	1	...	...	2	...	...	1	...	...	1	5
		No material improve- ment .. .. .	1	...	...	...	...	...	...	...	...	...	...	...	1
		Died in Institution ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Other Organs.	Quiescent or Arrested.	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...
		No material improve- ment .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ..	...	...	...	...	...	...	...	...	...	...	...	...	...
	Peripheral Glands.	Quiescent or Arrested.	...	...	...	...	...	...	...	...	...	...	...	...	...
		Improved .. .. .	...	...	...	...	...	...	...	...	2	...	...	1	3
		No material improve- ment .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...
		Died in Institution ..	...	...	...	...	...	...	...	...	...	...	...	...	...
Observation for purpose of Diagnosis			Under 1 week			1—2 weeks			2—4 weeks			More than 4 weeks			
	Tuberculous .. ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...
	Non-Tuberculous ..	...	...	1*	1	...	1*	...	...	...	1	...	20* 2	26	
	Doubtful .. .. .	...	...	...	...	...	...	...	...	...	...	...	...	...	...

\* Patients in Residential Open Air School—Pre-Tubercular.

**TABLE 56.** (FORM T. 54 OF THE MINISTRY OF HEALTH).**RESIDENTIAL INSTITUTIONS.**

(A) AVERAGE NUMBER OF BEDS AVAILABLE FOR PATIENTS DURING THE YEAR 1929.

	Observa- tion.	Pulmonary Tuberculosis.		Non-Pulmonary Tuberculosis.		Total
		" Sana- torium " Beds	" Hos- pital " Beds	Disease of Bones and Joints	Other Condi- tions.	
Adult Males . . . . .	..	5	18	..	..	23
Adult Females . . . . .	..	4	16	..	..	20
Children under 15 . . . . .	20	..	..	..	..	20
TOTAL . . . . .	20	9	34	..	..	63

(B) RETURN SHOWING THE EXTENT OF RESIDENTIAL TREATMENT DURING THE YEAR 1929.

			In Institu- tions on Jan. 1st	Admitt'd during the year	Dis- charged during the year	Died in the Institu- tions	In Institu- tions on Dec. 31st.
Number of Patients . . . .	Adults	M.	23	32	19	12	24
		F.	11	32	22	9	12
	Children	M.	3	2	5	..	..
		F.	8	5	9	..	..
Number of Observation Cases.	Adults	M.	1	1	2	..	..
		F.	..	1	..	..	1
	Children	M.	1 *8	.. *5	1 *13	..	..
		F.	1 *4	.. *5	1 *9	..	..

\*Patients in Residential Open-Air School : Pre-Tubercular.



TABLE 57. (FORM T. 56 OF THE MINISTRY OF HEALTH).

## PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1929.					1929.				
				Class T.B. minus	Class T.B. plus.				Class T.B. minus	Class T.B. plus.			
					Group 1	Group 2	Group 3	Total (Class T.B. plus)		Group 1	Group 2	Group 3	Total (Class T.B. plus)
ALIVE	Discharged as Cured . . . .	Adults	M.	17	..	1	..	1	..	..	..	..	..
			F.	15	..	..	..	..	..	..	..	..	
		Children	M.	3	..	..	..	..	..	..	..	..	..
			F.	2	..	1	..	1	..	..	..	..	..
	Disease Arrested	Adults	M.	26	4	3	..	7	..	..	..	..	..
			F.	12	1	1	..	2	..	..	..	..	..
		Children	M.	10	..	..	..	..	..	..	..	..	..
			F.	5	..	1	..	1	..	..	..	..	..
	Disease not Arrested	Adults	M.	25	6	22	17	45	15	2	8	3	13
			F.	18	7	8	10	25	8	6	10	3	19
		Children	M.	3	..	..	..	..	3	..	..	..	..
			F.	8	1	1	2	4	2	..	..	..	..
CONDITION NOT ASCERTAINED DURING THE YEAR . . . .				110	14	17	2	33	..	..	..	..	..
LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER . . . . .				433	86	46	20	152	..	..	..	..	..
DEAD . . . .	Adults	M.	38	26	61	225	312	1	2	1	2	5	
		F.	31	28	77	167	272	3	..	2	3	5	
	Children	M.	15	4	17	21	42	..	..	..	..	..	
		F.	13	3	14	17	34	2	..	..	..	..	
TOTALS . . . . .				785	180	270	481	931	34	10	21	11	42

TABLE 57—Continued

## NON-PULMONARY TUBERCULOSIS.

Condition at the time of the last record made during the year to which the Return relates.				Previous to 1929.					1929.					
				Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	Bones and Joints.	Abdominal.	Other Organs.	Peripheral Glands.	Total.	
ALIVE	Discharged as Cured . . . .	Adults.	M.	2	..	..	2	4	..	..	..	..	..	
			F.	1	..	..	2	3	..	..	..	..	..	
		Children	M.	3	1	3	6	13	..	..	..	..	..	
			F.	1	..	1	12	14	..	..	..	..	..	
	Disease Arrested	Adults.	M.	..	..	..	..	..	..	..	..	..	..	
			F.	..	1	1	..	2	..	..	..	..	..	
		Children	M.	3	4	2	1	10	..	..	..	..	..	
			F.	1	1	2	1	5	..	..	..	..	..	
	Disease not Arrested . .	Adults.	M.	3	..	2	..	5	1	1	2	..	4	
			F.	3	2	2	1	8	1	..	..	1	2	
		Children.	M.	5	9	3	6	23	..	2	..	1	3	
			F.	2	7	..	10	19	2	..	..	2	4	
	TRANSFERRED TO PULMONARY..				2	..	1	8	11	..	..	..	..	..
	CONDITION NOT ASCERTAINED DURING THE YEAR . . . .				24	19	16	52	111	..	..	..	..	..
	LOST SIGHT OF OR OTHERWISE REMOVED FROM DISPENSARY REGISTER . . . . .				38	24	34	174	270	..	1	..	..	1
	DEAD . . . .	Adults.	M.	19	16	7	4	46	..	..	..	..	..	
F.			13	15	9	..	37	..	..	..	1	1		
Children.		M.	10	15	14	3	42	..	..	..	..	..		
		F.	8	17	11	2	38	..	..	1	..	1		
TOTALS . . . . .				138	131	108	284	661	4	4	3	5	16	



TABLE 59.

ANNUAL RETURN SHOWING THE IMMEDIATE RESULTS OF TREATMENT OF PATIENTS DISCHARGED FROM  
MEATHOP SANATORIUM DURING THE YEAR 1929.

	Condition at time of discharge.	PULMONARY TUBERCULOSIS.—Duration of Residential Treatment.									
		Under 3 months			3-6 months.			6-12 months.			Total.
		M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	
CLASS A Cases in which Tubercle Bacilli have never been found ...	Quiescent ...	-	-	-	-	1	-	-	-	-	1
	Much improved ...	-	-	-	-	-	-	-	-	-	-
	No material improvement.	-	-	-	1	-	-	-	-	-	1
	Died in Institution ...	-	-	-	-	-	-	-	-	-	-
CLASS B 1 Early Cases in which Tubercle Bacilli have been found ...	Quiescent ...	-	-	-	1	-	-	1	-	-	2
	Much improved ...	-	-	-	-	-	-	-	-	-	-
	No material improvement.	-	-	-	-	-	-	1	-	-	1
	Died in Institution ...	-	-	-	-	-	-	-	-	-	-
CLASS B 2 Intermediate Cases in which Tubercle Bacilli have been found ...	Quiescent ...	-	-	-	-	1	-	-	-	-	1
	Much improved ...	-	-	-	-	-	-	1	1	-	2
	No material improvement.	-	-	-	-	-	-	1	-	-	1
	Died in Institution ...	-	1	-	-	-	-	-	-	-	1
CLASS B 3 Advanced Cases in which Tubercle Bacilli have been found ...	Quiescent ...	-	-	-	-	-	-	-	-	-	-
	Much improved ...	-	-	-	-	-	-	-	1	-	1
	No material improvement.	-	-	-	-	1	-	1	1	-	3
	Died in Institution ...	-	-	-	-	-	-	-	-	1	1
Total	...	-	1	-	2	3	-	5	3	-	15

TABLE 60.

SHOWING THE EXTENT OF RESIDENTIAL TREATMENT FOR PULMONARY TUBERCULOSIS DURING 1929.

		In Institutions on Jan. 1st.	Admitted during 1929.	Discharged during 1929.	Died in the Institutions.	In Institutions on Dec. 31st, 1929.
Meathop Sanatorium ...	Adults	M.	8	7	—	6
		F.	7	6	2	3
	Children	M.	—	—	—	—
		F.	—	—	—	—
Corporation Hospital. ...	Adults	M.	23	11	12	16
		F.	25	16	7	9
	Children	M.	—	—	—	—
		F.	3	4	—	2
Residential Open-Air School. ...	Children	M.	7	18	—	—
		F.	5	13	—	—
TOTAL ...	...	54	78	75	21	36

TABLE 61.

CONDITION AT END OF 1929 OF PATIENTS TREATED AT AND DISCHARGED  
FROM THE BLACKBURN CORPORATION HOSPITAL

Year Dis- charged	At full work. No Sym- ptoms 1	At full work, but with difficulty 2	Not able to work full time owing to ill health. 3	Not able to work but able to get about 4	Confined to the house 5	Confined to bed 6	Died (not in the In- stitution at time of first admis- sion). 7	Cannot trace 8	Total. 9
1913	15	—	—	3	1	—	42	30	91
1914	12	—	—	—	1	—	36	19	68
1915	5	—	—	—	—	1	58	9	73
1916	3	1	—	—	—	—	46	6	56
1917	6	—	1	—	—	1	29	1	38
1918	10	—	1	—	1	1	38	6	57
1919	17	1	1	2	1	1	46	4	73
1920	16	—	1	5	—	1	46	4	73
1921	18	1	1	3	3	1	45	5	77
1922	25	6	1	6	2	2	53	8	103
1923	29	4	3	6	4	3	63	11	123
1924	14	2	4	7	2	3	60	9	101
1925	8	8	8	7	5	3	50	14	103
1926	7	4	3	6	1	1	26	7	55
1927	9	3	4	3	3	3	13	7	45
1928	1	2	3	5	4	5	20	2	42
1929	—	3	3	8	3	2	12	—	31
Total..	195	35	34	61	31	28	683	142	1209
%	16.1	2.9	2.8	5.1	2.6	2.3	56.5	11.7	—



TABLE 62.

CONDITION AT END OF 1929 OF PATIENTS TREATED AT AND DISCHARGED  
FROM MEATHOP SANATORIUM.

Year Dis- charged.	At full work. No Symp- toms. 1	At full work, but with difficulty 2	Not able to work full time owing to ill health 3	Not able to work but able to get about 4	Confined to the house. 5	Confined to bed. 6	Dead 7	Can- not trace 8	Total.
1909 and previous	—	—	—	—	—	—	12	8	20
1910	—	—	—	—	—	—	19	4	23
1911	—	—	1	1	—	—	14	1	17
1912	—	—	—	—	—	—	16	3	19
1913	9	—	—	1	1	—	13	12	36
1914	12	1	—	—	—	—	12	12	38
1915	6	—	—	—	—	—	12	14	32
1916	9	—	1	—	—	—	15	5	30
1917	10	—	—	1	1	—	19	5	36
1918	5	—	1	4	1	1	23	5	40
1919	13	3	—	2	—	—	18	12	48
1920	13	2	1	3	—	—	17	6	42
1921	17	2	3	—	2	—	11	7	42
1922	7	—	—	—	—	—	11	4	22
1923	4	—	4	3	—	—	8	5	24
1924	2	3	2	3	—	—	11	5	26
1925	3	—	2	1	2	1	14	2	25
1926	5	1	2	5	—	2	8	3	26
1927	2	2	1	6	1	1	3	3	19
1928	1	1	3	6	3	—	4	1	19
1929	—	2	1	5	—	2	3	—	13
Total	119	17	22	41	11	7	263	117	597
%	19.9	2.8	3.7	6.9	1.9	1.2	44.1	19.5	—

TABLE 63.

## SUMMARY OF DISPENSARY STATISTICS AND OF HOME VISITING.

	1929	1928
Number of persons placed under observation for purpose of diagnosis .. .. .	48	53
Number of persons for whom the period of observation exceeded two months .. .. .	5	6
Number of visits paid by the Tuberculosis Officer to the homes of patients .. .. .	59	189
Number of visits paid by Nurses to the homes of patients for dispensary purposes .. .. .	3738	3067
Number of attendances of patients at the Dispensary :—		
Insured .. .. .	1076	1356
Not Insured .. .. .	540	792
Total .. .. .	1616	2148
Number of patients under Domiciliary Treatment :—		
Pulmonary .. .. .	153	146
Non-Pulmonary .. .. .	33	25
Total .. .. .	186	171
Number of reports received from practitioners in respect of patients on Domiciliary Treatment .. .. .	116	146
Number of specimens of sputum examined in connection with the work of the Dispensary :—		
Positive .. .. .	100	75
Negative .. .. .	276	114
Total .. .. .	376	189
Number of houses disinfected during the year :—		
(i) On removal of patient to Hospital .. .. .	64	67
(ii) On death .. .. .	63	70
(iii) On changing address.. .. .	5	3
Number of Reports made to Local War Pensions Committee by the Tuberculosis Officer on general progress and capacity for work of Tuberculous Discharged ex-Service men .. .. .	21	141

*PART VI.*

—

Venereal Diseases.

## VENEREAL DISEASES.

The arrangements for the treatment of Venereal Disease are the same as in 1928. Two Centres are provided, one, for both male and female patients, is at the Royal Infirmary, and the other, which is at the Health Department, is an "innocent" clinic for Maternity and Child Welfare cases maritally or parentally infected.

The treatment of male patients is carried out by Dr. Cran Duthie, and that of females by Dr. Mackenzie.

The Local Authority has an arrangement with both the Manchester Public Health Laboratory and the Blackburn and East Lancashire Royal Infirmary for the examination of pathological material.

### (a) *The Royal Infirmary Centre :*

Six hundred and thirty-one patients, of whom 340 were Blackburn residents, attended this Centre for the first time during the year. Of the Blackburn cases, 114 were suffering from Gonorrhœa, 60 from Syphilis, and 166 from conditions non-venereal.

Of the cases which attended for the first time during the year 111 were suffering from infections of more than one year's standing, and, as far as could be ascertained, had never received previous treatment at other centres for the same infection. The prospect of cure of venereal disease is influenced, in large measure, by the period which elapses between infection and the institution of treatment; the longer the delay the more serious the prognosis. In both males and females it is possible for the patient to overlook the early signs of syphilis, often painless and only noticeable on careful examination. Gonorrhœa, in the male especially, is a condition associated from its earliest stages with discomfort, pain and noticeable discharge, symptoms which should convey to the sufferer evidence of abnormality. Some, it is true, may delay securing treatment through sensitiveness, or fear of hearing their worst suspicions confirmed. Others through ignorance of the possibilities of untreated Gonorrhœa neglect to avail themselves of the facilities offered.

The appended Table shows the number of new cases seen yearly at the Royal Infirmary since 1921.

<i>Year.</i>		<i>Male.</i>		<i>Female.</i>		<i>Total.</i>
1921	..	334	..	191	..	525
1922	..	258	..	155	..	413
1923	..	264	..	154	..	418
1924	..	243	..	148	..	391
1925	..	225	..	131	..	356
1926	..	260	..	144	..	404
1927	..	300	..	103	..	403
1928	..	349	..	291	..	640
1929	..	380	..	251	..	631

The above figures are not to be accepted as representing the true incidence of venereal disease in Blackburn. Venereal diseases, though infectious, are nevertheless non-notifiable; consequently our present methods of ascertainment, through the treatment centres and death returns, are of necessity incomplete and misleading.

The total number of attendances for all patients was 16,621, 10,874 of which were in respect of Blackburn residents. The aggregate number of in-patient days at the Royal Infirmary was 437 for Blackburn cases, and 212 for county cases.

During the year 132 males and 77 females ceased to attend the Clinic before completion of the full course, and 11 females and 13 males discontinued attendance after completion of treatment, but before final tests for cure had been carried out. These numbers are less than in 1928.

(b) *The Victoria Street Centre :*

This centre is for the treatment of women maritally infected, and of children congenitally or accidentally infected. The Clinic forms part of the Maternity and Child Welfare Scheme, and all cases referred for treatment have passed through the Welfare Centres.

Many of these maritally-infected women are unwilling to attend the Royal Infirmary Clinic, but are quick to avail themselves of the facilities offered at the Health Office Centre.

At the beginning of the year six males and 15 females were under treatment for syphilis; 32 females for gonorrhœa; and 14 females for non-venereal conditions. In the course of the year the following cases were dealt with: Syphilis, 39; Gonorrhœa, 97; 85, non-venereal conditions. The total number of attendances made was 1,456, compared with 1,638 attendances in 1928.

It is again regrettable to note that 72 patients ceased to attend before completion of treatment, and that five ceased to attend after completion of treatment, but before the final tests for cure had been carried out.

Patients from Blackburn attended the following centres during the year for treatment.

<i>Treatment Centre—</i>	<i>Suffering from—</i>			<i>Other</i>	<i>Total</i>
	<i>Syphilis</i>	<i>Soft Chancre</i>	<i>Gonorrhœa</i>	<i>conditions</i>	<i>Visits</i>
County Borough of Burnley ...	—	—	1	—	10
County Borough of Preston ...	1	—	2	—	126
County Borough of Leeds ...	—	—	—	1	1

BLACKBURN ROYAL INFIRMARY—V.D. Beds : Male 2 ; Female 2

#### PARTICULARS OF STAFF.

	Duties.	If Employed Whole or Part-Time on Duties in V.D. Centre.
Medical Officers— Dr. W. Cran Duthie.	In charge of Male clinic.	Part-time.
Dr. E. Mackenzio .. ..	In charge of Female clinic..	Part-time.
Resident Medical Officers ..	Assist at male clinics .. ..	Part-time.
Nurses—Two .. .. .	To prepare for and assist at clinics .. .. . Do irrigations, &c., and keep registers .. .. .	One whole time. One at female clinic only.
Male Attendants—Two ..	To prepare for and assist at male clinics. Do irrigations, &c., and general porter's work in connection with clinics.	One nearly whole-time and evenings and week-ends and one at clinics only.
Dispenser—One .. .. .	General Dispensing duties	Four clinics per week.
Clerk .. .. .	Preparation of statistical returns and general clerical duties .. .. .	Part-time.



TABLE 64.

RETURN relating to all persons who were treated at the Treatment Centre at the Blackburn and East Lancashire Royal Infirmary during the year ended the 31st December, 1929.

	Syphilis		Soft Chancre		Gonorrhœa		Conditions other than Venereal		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
1. Number of cases which—										
(a) at the beginning of the year under report were under treatment or observation for .. .. .	160	92	5	...	200	145	7	9	372	246
(b) had been marked off in a previous year as having ceased to attend or as transferred to other Centres, and which returned to the Treatment Centre during the year under report suffering from the same infection .. .. .	8	7	...	...	9	1	..	..	17	8
Total—Items 1 (a) and 1 (b) ..	168	99	5	...	209	146	7	9	389	254
2 (a). Number of cases dealt with at the Treatment Centre during the year for the first time with infections of										
1. less than one year's standing	23	30	3	...	100	63	179	119	305	212
2. more than one year's standing	40	14	...	...	35	25	..	...	75	39
Total—Items 1 (a), 1 (b) and 2 (a)	231	143	8	...	344	234	186	128	769	505
2 (b). Number of cases included in Item 2 (a) known to have received previous treatment at other Centres for the same infection .. .. .	2	..	...	...	1	..	...	...	3	...
3. Number of cases which ceased to attend—										
(a) before completing the first course of treatment for .. .. .	32	24	2	...	90	43	...	...	124	67
(b) after one or more courses but before completion of treatment for .. .. .	8	10	...	...	...	...	...	...	8	10
(c) after completion of treatment, but before final tests as to cure of ..	6	9	...	...	5	4	...	...	11	13
4. Number of cases transferred to other Treatment Centres after treatment for .. .. .	2	2	...	...	6	1	...	...	8	3
5. Number of cases discharged after completion of treatment and observation for .. .. .	9	1	2	...	36	3	182	126	229	130
6. Number of cases which, at the end of the year under report, were under treatment or observation for ..	174	97	4	...	207	183	4	2	389	282
Total—Items 3, 4, 5, and 6 ..	231	143	8	...	344	234	186	128	769	505
7. Out-patient attendances—										
(a) For individual attention by the Medical Officer .. .. .	1495	2094	12	...	2745	2842	248	223	4500	5159
(b) For intermediate treatment, <i>e.g.</i> , irrigation, dressings, etc. .. ..	253	24	...	...	5904	781	...	...	6157	805
Total Attendances .. ..	1748	2118	12	...	8649	3623	248	223	10657	5964
8. Aggregate number of "In-patient days" of treatment given to persons who were suffering from ..	31	72	...	...	257	289	...	...	288	361

TABLE 64—(Continued).

	<i>Spirochetes.</i>	<i>For detection of Gonococci.</i>	<i>Other Organisms.</i>	<i>For Wassermann Reaction.</i>
9. Examination of Pathological material :—				
(a) Specimens which were examined at, and by the Pathologist of the Treatment Centre ... ..	1	1036	...	...
(b) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory ...	...	...	...	730

Statement showing the services rendered at the Treatment Centre during the year, classified according to the areas in which the patients resided.

Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.

	<i>Blackburn</i>	<i>Lancashire</i>	<i>Manchester</i>	<i>Rochdale</i>		<i>Total</i>
A. Number of cases from each area dealt with during the year for the first time and found to be suffering from :						
Syphilis ... ..	60	47	...	...	...	107
Soft chancre ... ..	...	3	...	...	...	3
Gonorrhœa ... ..	114	109	...	...	...	223
Conditions other than venereal ...	166	132	...	...	...	298
Total ... ..	340	291	...	...	...	631
B. Total number of attendances of all patients residing in each area ...	10874	5745	1	1	...	16621
C. Aggregate number of " In-patient days " of all patients residing in each area ... ..	437	212	...	...	...	649
D. Number of doses of arsenobenzol compounds given in the —						
1. Out-patient Clinic ... ..	1303	807	...	...	...	2110
2. In-patient Department ...	1	2	...	...	...	3
to patients residing in each area)						
E. Give the names of arsenobenzol compounds used in the treatment of Syphilis and the usual initial and final doses ... ..	Novarsenobillon in doses of 0·3 to 0·6 grammes and Sulfarsenol 0·45 to 0·6 grammes. Silver Salvarsan, 0·15 to 0·30 grammes; Stabilarsan, 0·45 to 0·6 grammes.					
F. State the amount and kind of treatment usually administered to a case of Syphilis of each of the types usually dealt with at the Treatment Centre...	Similar to that published by Col. Harrison in the <i>British Journal of Venereal Diseases</i> , Jan., 1926. (This was given in full in the Report for 1925 of the M.O.H., Blackburn.)					
G. State the nature of tests applied in deciding as to discharge of patients referred to in Item 5 on previous page	These were given in full in the M.O.H. Report for Blackburn in 1925.					

(Signed)

ELLA MACKENZIE, M.A., M.D., D.P.H.,

W. CRAN DUTHIE, M.B., C.M.,

Medical Officers of the Treatment Centre



TABLE 65—(Continued).

	For detection of <i>Spirochetes.</i>	<i>Gonococci.</i>	Other <i>Organisms.</i>	For <i>Wassermann</i> <i>Reaction.</i>
9. Examinations of Pathological material:—				
(a) Specimens which were examined at, and by the Medical Officer of, the Treatment Centre .. .. .	...	...	...	...
(b) Specimens from persons attending at the Treatment Centre which were sent for examination to an approved laboratory. ....	...	233	...	70
Statement showing the services rendered at the Treatment Centre during the year, classified according to the areas in which the patients resided.				
Name of County or County Borough (or Country in the case of persons residing elsewhere than in England and Wales) to be inserted in these headings.	Blackburn.			Total.
A. Number of cases from each area dealt with during the year for the first time and found to be suffering from:—				
Syphilis .. .. .	13	...	...	13
Soft Chancre .. .. .	...	...	...	...
Gonorrhœa .. .. .	50	...	...	50
Conditions other than Venereal .. ..	71	...	...	71
TOTAL .. .. .	134	...	...	134
B. Total number of attendances of all patients residing in each area .. ..	1456	...	...	1456
C. Aggregate number of "Inpatient days" of all patients residing in each area ..	...	...	...	...
D. Number of doses of arsenobenzol compounds given in the:—				
1. Out-patient Clinic .. .. .	338	...	...	338
2. In-patient Dept. .. .. .	...	...	...	...
E. Give the names of arsenobenzol compounds used in the treatment of Syphilis and the usual initial and final doses .. .. .	Neokharsivan—0.3 to 0.6 grammes; Sulfarsenol, 1½ ctgrms to 48 ctgrms.			
F. State the amount and kind of treatment usually administered to a case of Syphilis of each of the types usually dealt with at the Treatment Centre ..	<p>ADULTS.—<i>Primary Syphilis</i>—Two or more courses of 10 intravenous injections of Neok. + Pil. Hydrarg.</p> <p><i>Secondary Syphilis</i>—Three or more courses of 10 intravenous injections of Neok. + Pil. Hydrarg.</p> <p>INFANTS—One or more courses of 24 subcutaneous injections of sulfarsenol + Hyd. c Cret.</p>			
G. State the nature of tests applied in deciding as to discharge of patients referred to in Item 5 on previous page .. ..	<p>ADULTS.—<i>Primary Syphilis</i>—When Blood is negative at start Patient is discharged if Blood remains negative for two years without return of symptoms.</p> <p><i>Secondary Syphilis</i>—If Blood positive at start Patient discharged when Blood negative two years after treatment has ceased without return of symptoms.</p> <p>INFANTS.—Discharged if no return of symptoms for two years after treatment has ceased.</p> <p><i>Gonorrhœa</i>—Discharged when all clinical signs have disappeared and three successive negative smears obtained from Cervix and Urethra after a menstrual period and <i>provoc. vac.</i></p>			

(Signed) ELLA MACKENZIE, M.A., M.D., D.P.H.  
Medical Officer of the Treatment Centre.

*PART VII.*

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Maternity and Child  
Welfare.



## ANTE-NATAL WORK.

Dr. Mackenzie, the Lady Assistant Medical Officer, conducts an Ante-Natal Clinic twice weekly, particulars of which will be found in the appended Table.

TABLE 66.

## ANTE-NATAL CLINIC.

No. of Sessions held	...	...	...	...	...	98
No. of Attendances made	...	...	...	...	...	1766
No. of Individuals	...	...	...	...	...	669
No. of Normal Labours	...	...	...	...	...	334
No. of Abnormal Labours	...	...	...	...	...	48
No. Non-pregnant	...	...	...	...	...	186
No. Undelivered at End of 1929	...	...	...	...	...	101
Sent by Health Visitors and Centres	...	...	...	...	...	116
Sent by Matron, Springfield	...	...	...	...	...	116
Sent by Doctors	...	...	...	...	...	67
Sent by Midwives	...	...	...	...	...	92
Women who came on their own initiative	...	...	...	...	...	165
Women sent by another patient	...	...	...	...	...	92
Women sent by others	...	...	...	...	...	21
Primigravidæ Examined	...	...	...	...	...	220
Multigravidæ Examined	...	...	...	...	...	263
Primigravidæ undelivered at end of year	...	...	...	...	...	40
Multigravidæ undelivered at end of year	...	...	...	...	...	61

The 48 Abnormal Cases were as follows:—

Instrumental	...	...	...	9	Hydrocephalus	...	...	...	1
Still Births	...	...	...	12	Breech...	...	...	...	2
Cæsarean Section	...	...	...	11	Miscarriage	...	...	...	1
Twins	...	...	...	3	Eclampsia and Death	...	...	...	1
Premature Births	...	...	...	8					

Although the number of attendances made at the Ante-Natal Clinic differs but little from the corresponding number for 1928, seventy more women attended than in 1928.

Of the cases attending (669) 92 were sent by midwives as against 77 in 1928. During the year efforts have been made to secure the close co-operation of the midwives with the Ante-Natal Centre; with this end in view a series of six lectures, all of which were well attended, were given by well-known obstetricians to midwives practising in the district.



I would again urge the necessity of midwives bringing their cases to the Ante-Natal Centre for frequent examination during the expectant period. It is true that many of the midwives carry out ante-natal supervision with care and accuracy ; others, however, though equally conscientious in their efforts, do not show satisfactory results.

Ante-natal supervision calls for great skill and accuracy if the observations made are to be of any value. Inaccurate pelvimetry, an unnoticed trace of albumin in the urine, failure on the part of the midwife to appreciate the significance of a slight headache, may one or all be the precursors of danger and disaster. Attendance at an ante-natal clinic cannot ensure an uneventful confinement in every case, but medical supervision during the ante-natal period will eliminate and minimise many of those dangers which go to swell the maternal mortality and mortality rates.

No matter the degree of competence the midwife may bring to her ante-natal work, conditions may arise, or be actually present, in the expectant mother which are beyond the diagnostic capacity of the midwife. Consider the case of the expectant mother presenting no symptoms yet affected with compensated heart disease. Notwithstanding the absence of symptoms the position is fraught with danger to both mother and unborn child. If, during the course of pregnancy, compensation breaks down, the risk of premature labour, or even abortion, arises. Further, a diseased heart may not be able to withstand the severe and prolonged strain of labour. Medical examination alone could detect this condition, and appropriate regulation of the ante-natal period would do much towards safeguarding both mother and child.

Early phthisis, a condition beyond the recognition of anyone but a medical, becomes seriously aggravated during the puerperium, particularly so if the mother breast-feeds the baby. To minimise the attendant risks it is essential that the condition be recognised and treated on the accepted lines for phthisis.

These are but two of the conditions ascertainable only by one trained in medicine. Ante-natal supervision comprises more than pelvimetry, the diagnosis of the foetal position and periodical examination of the urine, it should include a thorough investigation of all the systems, respiratory, digestive and nervous, investigations which can be undertaken by a medical, but not a midwife.

## SUPERVISION OF MIDWIVES.

This work is undertaken by the Lady Assistant Medical Officer of Health, assisted by the Senior Health Visitor. Fifty-three midwives, none of whom are subsidised by the Local Authority, notified their intention to practise during the year. Of these, three died and eight removed from the Borough, leaving 42 on the register at the end of the year.

There are 41 trained midwives holding the Certificate of the Central Midwives Board, and the remaining one is a *bona fide* midwife. Thirty-one of the midwives are engaged in private practice, and 11 are attached to the District Nursing Association.

The domestic and personal cleanliness of the midwives has been found satisfactory.

There is again an improvement in the keeping of ante-natal records, although in many cases these records are incomplete and unsatisfactory.

Although all the midwives endeavour to carry out ante-natal supervision, I am of opinion that such work should be carried out under medical supervision. This point I have dealt with in the Section devoted to Ante-Natal Work.

## DOCTORS' ACCOUNTS UNDER SECTION 14 (1) OF THE MIDWIVES ACT, 1918.

Ninety-nine accounts were received from doctors for services rendered to patients to whom they had been called in an emergency by a qualified midwife.

This compares with 129 in 1928, and 117 in 1927. The total amount of the accounts was £123/18/0. The Sub-Committee assessed the amounts recoverable from the patients at £54/7/6, and £63/19/7 was actually paid by patients during the year.

## REASONS FOR SENDING FOR MEDICAL HELP DURING 1929.

*Pregnancy :—*

Albuminuria ... ..	10		
Presenting part not fixed ... ..	1	—	11

*Labour :—*

## Malpresentations :

Right Occipito Posterior ... ..	2		
Occipito Posterior ... ..	4		
Breech ... ..	7		
Cord ... ..	3		
Rupt. of Cord ... ..	1		
Foot ... ..	3		
Transverse ... ..	2		
Face ... ..	5		
Brow ... ..	1		
Placenta Prævia ... ..	3		
Undiagnosed ... ..	1	—	32

*Obstructed Labour :—*

Impacted Head ... ..	4		
Narrow passages ... ..	1		
Small pelvis ... ..	2		
Contracted pelvis ... ..	2	—	9

*Delayed Labour :—*

Uterine Inertia ... ..	12		
Prolonged labour ... ..	4		
Delayed labour ... ..	35		
Causes not diagnosed ... ..	7	—	58

*Hæmorrhages :—*

Ante Partum Hæmorrhage ... ..	6		
Post Partum Hæmorrhage ... ..	14		
Threatened Abortion ... ..	1		
Abortion ... ..	2	—	23

*Other Causes :—*

Retained Placenta ... ..	1		
Adherent Placenta ... ..	9		
Retained Membranes ... ..	8		
Miscarriage ... ..	1		
Torn Perineums ... ..	144		
Premature Birth ... ..	11		
Laceration of vaginal walls ... ..	4		
Patients' request ... ..	7	—	185

*Puerperium* :—

Distended and sore abdomen	...	2		
Inflammation of veins of legs	...	4		
High temperaturo and rapid pulse	...	7		
Pain in legs	... ..	4		
Heart Troublo	... ..	1	—	18

*Baby* :—

Discharge from eyes	... ..	9		
Spina bifida	... ..	5		
Still Birth	... ..	1		
Jaundice	... ..	1		
Phimosis	... ..	1		
Cyanosis	... ..	1		
Dangerous Feebleness...	... ..	19		
Convulsions	... ..	1		
Fœtal Distress	... ..	5		
Malformation	... ..	3		
Watery Eyes	... ..	6		
Sticky Eyes	... ..	10		
Hæm. form cord	... ..	1		
Rash	... ..	1	—	64

---

TOTAL ... 400

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## SPRINGFIELD MUNICIPAL MATERNITY HOME.

Two hundred and four cases were admitted during the year, being 11 less than in 1928.

No structural alterations were carried out during the year.

1. Number of Cases in the Home on 1st January, 1929.. .. 9
2. Number of Cases Admitted during 1929 :—
 

Ante-Natal Care	.. ..	12	
Confinements	.. ..	192	— 204
3. Average Duration of Stay .. .. 14 days
4. No. of Cases delivered by—
 

(a) Midwives..	.. .	161
(b) Doctors ..	.. .	31

5. No. of Cases in which Medical Assistance was sought by the Midwife, with reasons for requiring assistance .. .. .	68
(a) Ante-Natal :—	
Albuminuria... .. .	1
Contracted Pelvis .. .. .	1 — 2
(b) During Labour :—	
Post-partum hæmorrhage ... .. .	6
Uterine inertia ... .. .	4
Adherent Placenta ... .. .	5
Malpresentation ... .. .	2
Fœtal Distress ... .. .	2 — 19
(c) After labour :—	
Perineums Sutured... .. .	38
Secondary P.P. Hæmorrhage ... .. .	1
Embolism ... .. .	1
Rise of Temperature ... .. .	3 — 43
(d) For Infant :—	
Dangerous Feebleness ... .. .	1
Malformation ... .. .	1
Convulsions ... .. .	1
Spinal Bifida ... .. .	1 — 4
6. No. of Cases Notified as :	
(a) Puerperal Fever .. .. .	<i>Nil.</i>
(b) Puerperal Pyrexia ( <i>i.e.</i> rise of temperature to 100·4° F for 24 hours, or its recurrence within that period): with the result of treatment in each case .. .. .	4
(1) Toxæmia. Recovered.	
(2) Albuminuria, Twin Birth, Internal Version, Instrumental Labour.	
(3) Toxæmia. Recovered.	
(4) Emotional causes, Transference to own home, Temperature Normal, 9th day, made a good convalescence.	
7. No. of cases of Pemphigus Neonatorum .. .. .	<i>Nil.</i>
8. No. of Cases Notified as Ophthalmia Neonatorum, with result of Treatment in each case ... .. .	1
History of mother suffering from gonorrhœa. Child's eyes discharged on the 12th day. Treated at home by the District Nurse. Eye clear on the 20th day.	
9. No. of Cases of " Inflammation of the Eyes," however slight .. .. .	8

10. No. of Infants not entirely breast-fed while in the Institution, with reasons why they were not breast-fed :—

1. Cardiac disease of mother	...	...	...	...	...
2. General debility of mother	...	...	...	...	...
3. General debility of mother	...	...	...	...	...
4. Scanty lactation.	...	...	...	...	...
5. Inverted nipples	...	...	...	...	...
6. Inverted nipples	...	...	...	...	6

11. No. of Maternal Deaths, with causes :—

Pneumonia Ante-Natal.	...	...	...	...	1
-----------------------	-----	-----	-----	-----	---

12. No. of Fœtal Deaths (*a*) Stillborn, and (*b*) within 10 days of birth, and their Causes—and the Results of the post-mortem examination, if obtainable :—

(a) Macerated Fœtus	...	...	...	...	...
Macerated Fœtus	...	...	...	...	...
Macerated Fœtus	...	...	...	...	...
Hydrocephalus	...	...	...	...	...
Albuminuria	...	...	...	...	...
Twin ...	...	...	...	...	...
Asphyxia	...	...	...	...	...
Macerated	...	...	...	...	8
(b) Convulsions	...	...	...	...	...
Convulsions	...	...	...	...	2

## PUERPERAL FEVER AND PUERPERAL PYREXIA.

### (a) *Puerperal Fever :*

Nine cases were notified during the year, six in respect of Borough residents, and three, which were not investigated, in respect of women residing outside the Borough.

No. of Cases Notified	...	...	...	...	...	...	9
Borough Cases	...	...	...	...	...	...	6
Out of Borough Cases (these were not investigated)	...	...	...	...	...	...	3
No. of Cases Attended by a Doctor and Midwife	...	...	...	...	...	...	5
No. of Cases Attended in an Institution	...	...	...	...	...	...	1
No. of Cases Treated entirely at Home	...	...	...	...	...	...	3
No. of Cases Treated in Hospital (One Died)	...	...	...	...	...	...	3
No. of Cases Attended by a District Nurse...	...	...	...	...	...	...	2
No. of Cases which Recovered	...	...	...	...	...	...	5
No. of Deaths (Puerperal Sepsis)	...	...	...	...	...	...	1





## MATERNAL MORTALITY.

During the year 15 deaths occurred in the puerperal state. The maternal mortality rate for 1929 was 9·6 per 1,000 births, a figure which is higher than the corresponding rates for 1926 and 1927, when the rates were 8·03 and 7·6 respectively. The causes of maternal deaths are as under :

### *Causes of Death :—*

Eclampsia	...	...	...	...	...	...	2
Placenta Prævia	...	...	...	...	...	...	2
Puerperal Sepsis	...	...	...	...	...	...	2
Septic Peritonitis after an illegal operation for abortion	...						1
Septic Peritonitis	...	...	...	...	...	...	1
Puerperal Melancholia, with hypostatic congestion of lungs...							1
Pregnancy and acute Gastritis, with cardiac failure...	...						1
Pregnancy and Pneumonia	...	...	...	...	...	...	3
Pregnancy and V.D.H., with Cardiac Failure...	...						1
Pregnancy and Tuberculosis	...	...	...	...	...	...	1

All cases of maternal deaths are investigated and reported upon by Dr. Mackenzie.

## NOTIFICATION OF BIRTHS.

The Notification of Births Act, 1915, requires that all births be notified to the Medical Officer of Health within 36 hours of their occurrence. Following the receipt of notification, a very large proportion of the births are visited. All cases notified by midwives are visited as soon as possible after the birth. Cases attended by a doctor are visited, where the home circumstances warrant it, as soon as possible after the doctor ceases attendance.

It is required that births be both registered and notified, and although registration is invariably carried out, 106 parents neglected to notify during the year. In order that no births be missed, the notifications are checked by comparison with the returns of the Registrar of Births, and a letter sent to the parents of any child whose birth has not been notified.

The following Table illustrates the sources of notifications during the year :—

	<i>Live Births.</i>		<i>Still Births.</i>		<i>Total.</i>		<i>Percentage.</i>
Doctors	103	..	17	..	120	..	6·9
Midwives	1367	..	51	..	1418	..	82·2
Parents and Others	180	..	7	..	187	..	10·9

## STILL BIRTHS.

The number of still births registered during the year was 75. An ætiological classification of the causes to which the still births were attributable will be found in Table 67.

## NEO-NATAL DEATHS.

During the year 61 deaths occurred of infants in the first two months of life. 22 due to foetal states, 32 to prematurity, and 7 to post-natal causes.

The number of neo-natal deaths was 3·9% of live births notified.

All neo-natal deaths were investigated, and the appended Table gives a classification of the cause leading to death :—

Various Foetal States ..	..	..	..	..	..	..	22
Prematurity ..	..	..	..	..	..	..	32
Post Natal Causes ..	..	..	..	..	..	..	7
							<hr/>
						TOTAL..	61
							<hr/>

**TABLE 67.**

								(1st 4 weeks).	
								Still Birth.	Neo-Natal.
1.— <i>Complications of Labour</i> :—									
Breech Presentation	...	...	...	...	...	...	7	...	0
Prolonged or Difficult Labour in :									
Face Presentation	...	...	...	...	...	...	1	...	0
Difficult Forceps Deliveries	...	...	...	...	...	...	3	...	0
Excessive Size of Fœtus (including post-maturity)	...	...	...	...	...	...	1	...	0
Prolapse of Cord	...	...	...	...	...	...	1	...	0
Coiling of Cord round fœtus	...	...	...	...	...	...	2	...	0
Others	...	...	...	...	...	...	3	...	0
2.— <i>Ante-Partum Hæmorrhage</i> :—									
Placenta prævia	...	...	...	...	...	...	5	...	0
Accidental hæmorrhage	...	...	...	...	...	...	1	...	0
3.— <i>Toxæmia of Pregnancy</i> :—									
Albuminuria of Pregnancy	...	...	...	...	...	...	9	...	0
4.— <i>Syphilis</i> :—									
Probable	...	...	...	...	...	...	3	...	1
5.— <i>Maternal Diseases</i> :—									
Others	...	...	...	...	...	...	4	...	0
7.— <i>Fœtal States (excluding Syphilis)</i> :—									
Hydrocephalus	...	...	...	...	...	...	1	...	0
Anencephaly...	...	...	...	...	...	...	1	...	0
Spina bifida	...	...	...	...	...	...	0	...	5
Other deformities	...	...	...	...	...	...	0	...	2
Multiple pregnancy...	...	...	...	...	...	...	0	...	1
Others	...	...	...	...	...	...	0	...	14
8.— <i>Prematurity</i>								0	29
9.— <i>Cause Unknown</i>								33	0
TOTAL								75	52

## INFANTILE MORTALITY.

During the year there were 125 deaths of infants, compared with 139 in 1928. This figure corresponds to an infantile mortality rate of 80·4 per 1,000 births registered, compared with 80·3, in 1928.

Of the deaths certified, 119 were of legitimate, and six of illegitimate children. The rate of infantile mortality amongst legitimate infants was 79·8 per 1,000 legitimate births registered, and amongst illegitimate children, 93·7 per 1,000 illegitimate births registered.

Of the deaths certified 52, or 41·6%, occurred within the first month of life.

The more important causes of death were as follows :—

<i>Cause.</i>	<i>Number of Deaths.</i>	<i>Percentage of Total Infantile Deaths.</i>
Atrophy, Debility and Marasmus..	21 ..	16·8
Premature Birth .....	32 ..	25·6
Bronchitis.....	13 ..	10·4
Pneumonia .....	24 ..	19·2

The number of deaths from bronchitis (13), and pneumonia (24), is higher than in 1928, when the figures were 18 and 17 respectively.

St. Mary's Ward shows the highest rate of infantile mortality (126), followed by St. Peter's (116), and St. Paul's (110). St. Luke's exhibited the lowest rate (44).

Taking the Infantile Mortality over a period of ten years, St. Silas's shows by far the best figures, St. Andrew's comes next, closely followed by St. John's. The worst wards during the same period were St. Mary's, St. Peter's and Trinity. In Table 68 it will be noted that the density of population is lowest in those wards with the lowest infantile mortality rate.

TABLE 68.

INFANTILE MORTALITY IN WARDS AND COMPARISON WITH  
DENSITY OF POPULATION.

WARD	Estimated Population mid- dle of 1929	Persons per Acre	Rooms per person	Births	Birth Rate	Infantile Mortality	Deaths	Death Rate	Natural Increase or Decrease of Popul'n 1928-9	Census Popula- tion 1926 (March)
	1	2	3	4	5	6	7	8	9	10
St. Stephen's ..	10906	9.2	1.08	191	17.5	62	195	17.8	— 4	11212
Trinity ..	8771	58.0	1.05	93	10.6	96	124	14.1	—31	8696
St. Michael's ..	8883	14.1	1.10	92	10.3	108	131	14.7	—39	8787
St. John's ..	7117	69.2	1.13	80	11.2	99	84	11.8	— 4	6957
St. Silas's ..	8921	8.9	1.50	63	7.0	63	135	15.1	—72	9210
St. Paul's ..	9660	78.0	1.12	127	13.1	110	152	15.7	—25	9715
St. Peter's ..	6640	51.1	1.05	103	15.5	116	108	16.2	— 5	6613
St. Mary's ..	5463	31.8	1.02	87	15.9	126	99	18.1	—12	5474
St. Matthew's ..	9222	83.2	1.05	102	11.0	39	117	12.6	—15	9200
St. Thomas's ..	11941	6.8	1.08	126	10.5	103	188	15.7	—62	11941
Park ..	9384	14.3	1.08	137	14.6	58	148	15.7	—11	9467
St. Luke's ..	7492	44.2	1.03	113	15.0	44	114	15.2	— 1	7641
St. Mark's ..	10313	25.5	1.13	98	9.5	71	113	10.9	—15	10311
St. Andrew's ..	10587	9.2	1.07	142	13.4	56	163	15.3	—21	11273
	125300	16.2	1.11	1554	12.4	80	1871	14.9	—317	126497

COMPARISON OF BLACKBURN INFANTILE MORTALITY RATE WITH THAT OF  
ENGLAND AND WALES FROM 1920—1929.

	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
Blackburn.....	110	109	98	100	84	97	89	77	80	80
England and Wales..	80	83	77	69	75	75	70	69	65	74



TABLE 69.

INFANTILE MORTALITY IN WARDS FROM 1920 TO 1929.

WARD.	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	Average for 10 y'rs
St. Stephen's ... ..	136	92	67	56	68	65	130	45	47	62	76.8
Trinity ... ..	117	130	129	163	60	101	62	153	118	96	112.9
St. Michael's ... ..	106	83	78	105	99	80	78	46	65	108	84.8
St. John's ... ..	111	140	76	75	101	61	66	52	108	99	88.9
St. Silas's ... ..	53	59	69	50	44	29	67	41	53	63	52.8
St. Paul's ... ..	124	134	133	130	76	107	83	59	73	110	102.9
St. Peter's ... ..	197	114	170	91	149	105	104	119	127	116	129.2
St. Mary's... ..	138	98	138	128	99	188	158	97	77	126	124.7
St. Matthew's ... ..	100	127	111	90	120	65	106	41	105	39	90.4
St. Thomas's ... ..	90	106	71	130	76	84	53	76	77	103	86.6
Park ... ..	125	108	69	110	86	118	75	80	81	58	91.0
St. Luke's... ..	99	99	116	74	90	118	92	147	111	44	99.0
St. Mark's... ..	73	129	106	85	60	122	99	61	51	71	85.7
St. Andrew's ... ..	81	87	72	81	73	110	75	68	60	56	76.3
Borough ... ..	110	109	98	100	84	97	89	77	80	80	92.4



TABLE 70.—DEATHS UNDER ONE YEAR, ARRANGED ACCORDING TO DAYS, WEEKS AND MONTHS.

CAUSES OF DEATH.		1st day.	2nd day.	3rd day.	4th day.	5th day.	6th day.	7th day.	1st week.	2nd week.	3rd week.	4th week.	Under 1 month.	1 month to 2.	2 months to 3.	3 months to 4.	4 months to 5.	5 months to 6.	6 months to 7.	7 months to 8.	8 months to 9.	9 months to 10.	10 months to 11	11 months to 12	TOTAL.
All Causes { Certified ... .. { Uncertified... ..		24 ... ..	4 ... ..	1 ... ..	5 ... ..	1 ... ..	— ... ..	1 ... ..	36 ... ..	12 ... ..	4 ... ..	— ... ..	52 ... ..	9 ... ..	5 ... ..	11 ... ..	2 ... ..	9 ... ..	9 ... ..	7 ... ..	8 ... ..	1 ... ..	4 ... ..	8 ... ..	125 ... ..
{ Smallpox ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Chickenpox ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Measles ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Scarlet Fever ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Whooping-cough ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Diphtheria and Croup ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Erysipelas ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Tuberculous Meningitis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Abdominal Tuberculosis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Other Tuberculous Diseases ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Meningitis (not Tuberculous) ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Convulsions ... ..		2 ... ..	—	—	—	—	—	—	3 ... ..	—	1 ... ..	—	4 ... ..	—	1 ... ..	—	—	—	—	—	—	—	—	—	—
{ Laryngitis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Bronchitis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Pneumonia (all forms) ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Diarrhoea ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Enteritis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Gastritis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Syphilis ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Rickets ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Suffocation, overlying ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Injury at birth ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Atelectasis ... ..		1 ... ..	—	—	—	—	—	—	1 ... ..	—	—	—	1 ... ..	—	—	—	—	—	—	—	—	—	—	—	—
{ Congenital Malformations ... ..		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
{ Premature Birth ... ..		15 ... ..	2 ... ..	1 ... ..	2 ... ..	—	—	—	21 ... ..	5 ... ..	3 ... ..	—	29 ... ..	3 ... ..	—	—	—	—	—	—	—	—	—	—	—
{ Atrophy, Debility and Marasmus ... ..		4 ... ..	2 ... ..	—	2 ... ..	—	—	—	8 ... ..	3 ... ..	—	—	11 ... ..	2 ... ..	—	—	—	—	—	—	—	—	—	—	—
{ Other causes ... ..		2 ... ..	—	—	—	—	—	—	2 ... ..	2 ... ..	—	—	4 ... ..	1 ... ..	—	—	—	—	—	—	—	—	—	—	—
TOTAL ... ..		24 ... ..	4 ... ..	1 ... ..	5 ... ..	1 ... ..	—	1 ... ..	36 ... ..	12 ... ..	4 ... ..	—	52 ... ..	9 ... ..	5 ... ..	11 ... ..	2 ... ..	9 ... ..	9 ... ..	7 ... ..	8 ... ..	1 ... ..	4 ... ..	8 ... ..	125 ... ..

Nett Births registered during the calendar year ...	1490	Nett Deaths registered during the calendar year of	119
{ legitimate .....	64	{ legitimate infants .....	6
{ illegitimate ...	1490	{ illegitimate infants ...	119

TABLE 71.

## DEATH RATES UNDER ONE YEAR OF AGE.

CAUSE OF DEATH.	RATES PER 1,000 BIRTHS.													
	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	
Small-pox ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Chicken-pox ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Measles ... ..	2.4	4.5	0.0	3.5	1.1	2.7	0.9	0.5	4.2	0.5	3.5	0.0	0.0	
Scarlet Fever ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Whooping-cough ... ..	3.0	3.8	0.5	0.0	3.5	1.8	2.3	2.0	2.1	3.4	0.0	1.1	1.2	
Diphtheria and Croup ... ..	0.6	0.0	0.0	0.7	0.3	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	
Erysipelas ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Tuberculous Meningitis ... ..	1.8	3.2	1.0	1.0	0.0	0.4	0.4	0.5	0.0	0.5	0.0	0.0	0.6	
Abdominal Tuberculosis ... ..	1.8	2.5	0.5	0.4	1.1	0.4	0.0	0.5	0.5	0.5	0.0	0.5	0.0	
Other Tuberculous Diseases... ..	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.6	
Meningitis ( <i>not Tuberculous</i> )... ..	2.4	1.9	0.0	4.2	0.7	2.3	0.9	1.0	2.1	2.2	0.5	1.7	1.9	
Convulsions ... ..	12.3	5.1	4.9	4.4	8.3	4.5	4.3	5.0	5.2	2.2	2.9	2.8	4.5	
Laryngitis ... ..	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Bronchitis ... ..	11.0	14.8	11.4	10.2	10.6	5.9	7.1	7.0	12.0	8.6	6.4	10.3	8.3	
Pneumonia ( <i>all forms</i> ) ... ..	11.0	10.9	10.8	10.2	14.2	12.8	12.4	12.6	13.1	13.2	11.7	9.8	15.4	
Diarrhoea ... ..	8.0	10.9	5.4	10.2	7.9	3.2	4.3	5.5	4.7	4.0	7.0	1.7	2.5	
Enteritis ... ..	1.2	3.2	0.0	1.4	4.7	4.1	4.8	0.0	0.5	1.1	0.0	0.5	0.0	
Gastritis ... ..	0.0	0.0	0.5	1.7	1.1	1.8	0.9	3.0	1.0	1.7	1.7	0.0	0.0	
Syphilis ... ..	0.6	3.2	0.5	1.7	2.3	0.9	2.8	2.0	2.6	0.0	0.0	2.3	0.6	
Rickets ... ..	0.6	0.0	1.0	0.0	1.5	0.9	0.4	0.0	0.0	0.0	0.0	0.0	0.0	
Suffocation, overlying ... ..	0.6	0.0	0.5	0.7	0.0	0.4	0.4	0.0	0.0	0.0	0.5	0.5	0.6	
Injury at Birth ... ..	0.6	0.0	0.5	1.4	0.3	1.3	0.4	0.0	0.0	0.0	0.0	0.5	0.0	
Atelectasis ... ..	1.8	2.5	1.6	1.7	2.7	0.4	0.9	0.5	0.5	0.0	2.3	0.0	0.6	
Congenital Malformations ... ..	4.3	6.4	2.7	4.2	3.9	4.5	10.5	3.5	5.7	5.7	3.5	0.5	2.5	
Premature Birth ... ..	23.9	30.9	26.6	23.7	22.5	25.7	25.3	15.6	20.5	23.5	14.7	16.1	20.6	
Atrophy, Debility and Marasmus ... ..	12.9	7.9	16.3	18.0	14.2	14.2	10.9	10.6	8.6	14.3	17.0	21.9	13.5	
Other causes ... ..	9.2	10.3	9.2	9.9	7.1	9.6	9.5	14.1	13.6	6.3	4.7	8.6	6.4	

## THE PRE-SCHOOL CHILD.

## CAUSES OF DEATH IN CHILDREN FROM ONE TO FIVE YEARS OF AGE.

	1928	1929
Pneumonia .. .. .	11	29
Infectious Diseases (Non-Tubercular) .. ..	10	10
Tuberculosis (all forms) .. .. .	3	5
Digestive System Diseases .. .. .	3	5
All other causes .. .. .	16	21
	—	—
	43	70
	—	—

There are now 11 Nursery Classes in Blackburn, with accommodation for 450 children under the age of five years. The work carried out at these classes has been fully described in the School Medical Report.

Many of the children in attendance at these schools have been under supervision at the Child Welfare Centres. In order to secure continuity the Assistant Medical Officer for Maternity and Child Welfare, who is also Assistant School Medical Officer, undertakes the School Medical inspection and treatment of Nursery Class children.

## OPHTHALMIA NEONATORUM.

Thirteen cases were notified during the year, one of which was in respect of an out of the Borough case born in Springfield.

A bed is now available at the Corporation Hospital for the reception of cases of ophthalmia where adequate attention is not possible in the home.

TABLE 72.

## RESULTS OF TREATMENT.

Cases Treated.			Vision Unimpaired	Vision Impaired	Total Blindness	Deaths.
Notified	At Home.	In Hospital				
13	11	2	1	—	—	1

Six of the cases treated at home were attended by District Nurses.

## MATERNITY AND CHILD WELFARE CENTRES.

There are six Maternity and Child Welfare Centres, situated at Princes Street, Nova Scotia, Kendal Street, The Griffin Parochial Hall, Harwood Street and Cornelian Street. At Harwood Street two sessions are held each week ; at each of the other centres there is one weekly session.

The Cornelian Street Centre was opened with the object of relieving the pressure at Kendal Street Clinic. This object has not been realised, as the attendances at the latter clinic in 1929 have been greater than in previous years, whereas Cornelian Street has tapped a fresh source at the Brownhill Housing Estate.

In order to obviate overcrowding at Kendal Street Clinic arrangements have now been made to hold two sessions weekly, instead of one as formerly.

The following Table shows that the attendances numbered 23,183, compared with 25,619 in 1928. The decrease in the number of Clinic attendances was contributed to by several factors. In the early part of the year many mothers refused to bring their children to the Centres through fear of exposing them to the bitterly cold conditions. At this period also the high incidence of broncho-pneumonia and other respiratory conditions confined many children to their homes.

In the latter three months of the year the unduly heavy rainfall, coupled as it was with brisk epidemics of scarlet fever and chicken-pox, further reduced the attendances.

TABLE 73.

	Princes Street.	Copy Nook (2 sessions weekly).	Bolton Road	Kendal Street.	Griffin.	Cornelian Street	Total, 1929.	Total, 1928.	Total, 1927.
Infants :—									
New cases under 1 year	129	257	142	148	146	67	889	928	861
No. of re-attendances..	1248	3102	1304	2039	1386	963	10042	10691	9354
New cases over 1 year..	18	49	23	24	19	13	146	227	238
No. of re-attendances..	1668	3276	1925	2288	1442	858	11457	12888	10909
Attendances of Infants	3063	6684	3394	4499	2993	1901	22534	24724	21362
Consultations with Dr.	643	1150	604	638	692	348	4075	4642	4801
Expectant Mothers—									
No. of new cases ..	25	39	23	23	11	5	126	141	136
No. of re-attendances	131	148	82	85	59	18	523	744	725
Total Attendances of Expectant Mothers..	156	187	105	108	70	23	649	885	861
Total Attendances.. ..	3219	6871	3499	4607	3063	1924	23183	25619	22223
Average Attendance per session 1929 .. ..	65.0	70.0	69.0	94.0	61.0	40.0	*483	..	
1928 .. ..	84.0	76.9	80.2	100.0	66.9	31.5		*533	
1927 .. ..	83.0	71.8	78.7	90.0	58.3	..		..	*463

\* Total average attendance *each week* at all the Centres.

A doctor attends at each session, together with two Health Visitors, and assistance is given by three or four voluntary workers. To these ladies I wish to express my thanks for the enthusiastic manner in which they have performed their self-imposed duties.

Of the 1554 births notified during the year, 889, or 57%, attended the Infant Consultation Centres.

The percentages seen by a Doctor at each session per Clinic are as under :—

Princes' Street .. ..	21.3
Copy Nook .. ..	17.2
Nova Scotia .. ..	17.8
Kendal Street .. ..	14.1
Griffin .. ..	20.4
Cornelian Street .. ..	18.3



The talks by Health Visitors at the Clinics have been continued. The syllabus is as under :—

I. Expectant Motherhood. II Care of the New-Born Infant. III The Diet of a Nursing Mother. IV Breast Feeding. V Artificial Feeding. VI Weaning. VII The Hygiene of Infancy. VIII Baby Clothes. IX The Development of the Child. X Feeding from 1-5 Years. XI Rickets. XII Common Ailments of Infancy.

The principal defects noted in infants attending the Centres were those due to early discontinuance of breast-feeding, and the results of improper feeding. In male infants a not infrequent defect noted was that due to maternal neglect of the prepuce, with consequent inflammation of the parts. Possibly the most common fault is overclothing of the chest and abdomen with tight binders and under-garments, whereas the lower limbs are left underclothed.

The appended Table shows the deaths of babies who attended the Clinics during their first year, as compared with the deaths of those who never attended the Clinics.

**TABLE 74.**

Area		Deaths	Attend'd a Clinic		Attendance at Birth			Full Time Baby		Births during same period.	Deaths in Institutions			
			Yes	No	Doctor	Mid- wife	Doctor & Mid- wife	Yes	No		Queens Park	Royal Infir- mary	Spring field	Reg. Mat. Home
District	I.	20	2	18	3	7	10	12	8	233	1	4	..	1
..	II.	21	4	17	1	10	10	16	5	271	3	2	..	1
..	III.	16	1	15	1	3	12	8	8	286	3	..	..	2
..	IV.	11	5	6	1	7	3	10	1	127	1	..	..	..
..	V.	15	4	11	..	6	9	10	5	212	2	1	2	..
..	VI.	24	6	18	..	16	8	15	9	225	6	..	..	..
..	VII.	18	5	13	1	10	7	13	5	200	2	..	1	..
		125	27	98	7	59	59	84	41	1554	18	7	3	4



# DENTAL TREATMENT OF MATERNITY AND CHILD WELFARE CASES.

Mr. H. Yates, the Senior Dental Surgeon, carried out the following work in connection with Maternity and Child Welfare Cases :—

	1928	1929
Number of Sessions held .. .. .	12	67
Number of Patients : Mothers .. .. .	57	139
Children .. .. .	163	286
Permanent Teeth Extracted .. .. .	116	305
Permanent Teeth Filled .. .. .	3	70
Temporary Teeth Extracted .. .. .	184	447
Temporary Teeth Filled .. .. .	3	15
Other Operations .. .. .	27	83

From the above Table it will be noted that the dental work in connection with the Maternity and Child Welfare Scheme has been considerably extended during the year, the number of sessions held and treatments given being in large excess of the corresponding figures in previous years.

TABLE 75.

THE WORK OF THE HEALTH VISITORS  
HOME VISITING.

	<i>District</i> I.	<i>District</i> II.	<i>District</i> III.	<i>District</i> IV.	<i>District</i> V.	<i>District</i> VI.	<i>District</i> VII.	<i>Totals</i>
Visits to Expectant Mothers—								
First Visits .. ..	52	49	37	36	31	59	80	344
Re-visits.. ..	49	88	16	34	62	36	48	333
Ineffective Visits ..	5	1	7	...	6	...	9	28
Infants under 1 year—								
First Visits .. ..	245	265	281	139	170	260	200	1560
Re-visits.. ..	667	667	659	472	568	663	704	4400
Ineffective Visits ..	88	69	157	97	196	38	114	759
Infants aged 1 year—								
Re-visits.. ..	548	626	667	441	464	601	545	3892
Special Visits.. ..	1	...	...	...	2	1	3	7
Ineffective Visits ..	58	30	114	34	103	25	89	453
Children 2—5 years ..	981	1381	967	646	531	1235	1009	6750
Ineffective .. ..	190	73	112	24	45	4	195	643
Ophthalmia								
Neonatorum—								
First Visits .. ..	3	3	1	4	1	5	...	17
Re-visits.. ..	...	8	1	...	2	4	...	15
Diarrhoea—								
First Visits .. ..	2	...	...	...	...	...	...	2
Re-visits.. ..	1	...	...	...	...	...	...	1
Stillbirths .. ..	10	16	13	4	5	7	5	60
Infectious Diseases ..	...	...	...	...	...	...	...	...
Doctors' Accounts .	7	30	11	7	7	17	11	90
Milk (Mothers and Children Order)—								
Visits .. ..	...	2	...	...	...	...	...	2
Midwives—								
Routine .. ..	94	...	...	...	...	...	...	94
Special .. ..	9	...	...	...	...	...	...	9
Ineffective .. ..	10	...	...	...	...	...	...	10
Puerperal Fever Visits	1	6	9	1	2	...	2	21
Houses where deaths of infants occurred	8	12	5	4	5	3	4	41
Miscellaneous Visits..	...	...	...	...	...	...	...	...
TOTALS .. 1929 ..	3029	3326	3057	1943	2200	2958	3018	19531
1928 ..	3537	3548	3143	2088	2473	2999	3102	20890

TABLE 76.

## CLINIC SESSIONS ATTENDED.

	<i>District</i> I.	<i>District</i> II.	<i>District</i> III.	<i>District</i> IV.	<i>District</i> V.	<i>District</i> VI.	<i>District</i> VII.	<i>Totals.</i>
Maternity and Child Welfare Clinics ..	75	108	113	95	97	93	96	677
Ante-Natal Clinics ..	17	17	15	93	16	12	17	187
Special V.D. Clinics ..	...	17	...	44	18	13	...	92
Dr. Briggs' Ortho- pædic Clinic .. ..	2	...	4	4	3	...	3	16
Dental & other Clinics	4	9	1	7	11	9	3	44
TOTALS ..	98	151	133	243	145	127	119	1016
Total Houses visited ..	2484	2594	2579	1543	1956	2292	2276	15724
Total Persons visited. .	2953	3342	3047	1918	2203	2950	3019	19432

## MATERNITY AND CHILD WELFARE ACT, 1918.

The following Table gives the number of families to whom assistance was rendered during 1929 under the Milk (Mothers and Children) Order.

TABLE 77.

Price.	No. on Jan. 1st, 1929.	New Cases during Year.	Cases Discontinued.	No. on Dec. 31st, 1929.
Free .. .. .	102	191	191	102
Quarter Price .	16	46	52	10
Half-Price .. ..	2	27	28	1
<b>TOTAL .. .. .</b>	<b>120</b>	<b>264</b>	<b>271</b>	<b>113</b>

For former years the corresponding figures (totals) are :—

1922 .. .. .	*88	410	404	†94
1923 .. .. .	*94	433	363	†164
1924 .. .. .	*164	494	528	†130
1925 .. .. .	*130	242	255	†117
1926 .. .. .	*117	316	238	†195
1927 .. .. .	*195	367	323	†239
1928 .. .. .	*239	363	482	†120

\* Beginning of Year.      † End of Year.

During the year 17,305 pounds of dried milk have been supplied to expectant and nursing mothers and young children at a cost to the Local Authority of £621/18/0. In 1928, 25,959 pounds were supplied at a cost of £1,024/8/6. The nett cost in 1929, therefore, fell by £402/10/6.

Erroneous statements as to family income on the application form for assisted milk supply have become so frequent that it has been decided to institute legal proceedings against offenders. In the majority of cases misstatement of income has been due to the husband retaining, unknown to his wife, an unfair proportion of his earnings.

## CARE OF ILLEGITIMATE CHILDREN.

No special provision is made by the Corporation for the care of illegitimate children ; this work is undertaken at Viewfield Hostel by the Manchester Diocesan Association for Preventive and Rescue Work. The Health Department maintains a close co-operation with the authorities of the Hostel, and takes an active interest in the important work carried out there.

I am indebted to Miss Duckworth for the appended particulars :—

	<i>Mothers.</i>	<i>Babies.</i>	<i>Boarders.</i>
Number of Beds . . . . .	12	12	4
Number of Cases Admitted, 1929.. . . .	14	14	3
Number in Hostel, Jan. 1st, 1929.. . . .	11	11	2
Number returned to relatives and friends . .	7	7	..
Number of Mothers sent to situations .	6	..	..
Babies kept as boarders.. . . .	..	6 (for varying periods)	..
Babies taken back as boarders . . . . .	..	1	..
Baby boarders discharged . . . . .	..	6	..

At the end of the year there were eight babies under one year. Of these four were on four-hourly breast feeds.

## PREMATURE BIRTHS.

During the year 67 premature births were brought to the notice of the Health Department, 32 of whom were living on December 31st, 1929.

The following Table gives an analysis of the causes of prematurity :—

1.—Multiple Pregnancy . . . . .	7
2.—Albuminuria in Mother . . . . .	4
3.—Diabetes in Mother . . . . .	1
4.—Other Illness of Mother . . . . .	8
5.—Shock . . . . .	3
6.—Venereal Disease . . . . .	5
7.—Ante-partum Hæmorrhage . . . . .	2
8.—Not Known . . . . .	37
No. Still Living . . . . .	32
No. Dead . . . . .	35

## NURSING HOMES REGISTRATION ACT, 1927.

On receipt of application under the above Act for registration of premises, the premises are visited by either the Medical Officer of Health or by Dr. Mackenzie. On the occasion of this visit a survey is made of the available accommodation, advice is given as to structural or other alterations required, and the number of beds to be used for the reception of cases is decided upon.

Following registration the Homes are visited quarterly by Dr. Mackenzie, and at frequent intervals by the Senior Health Visitor. All have been found satisfactory.

The appended Table gives particulars of applications for registration in 1929 :—

	<i>Nursing Homes.</i>	<i>Maternity Homes.</i>
Number of Applications .. .. .	0	2
Number of Houses Registered .. ..	0	2
Number of Orders made refusing or Cancelling Registration .. .. .	0	0
Number of Appeals against such Orders..	0	0
Number of Applications for Exemption from Registration .. .. .	0	0
Number of cases in which Exemption has been—		
(a) Granted .. .. .	0	0
(b) Withdrawn .. .. .	0	0
(c) Refused.. .. .	0	0

*(a) Maternity Homes :*

At the beginning of the year there were eight private maternity homes in Blackburn ; during the year two further homes were registered and two homes were discontinued. At the end of the year 20 lying-in beds and eight labour beds were available in private homes.

*(b) Nursing Homes :*

At the end of the year there were 3 registered Nursing Homes in Blackburn, with a total of 25 beds for the reception of the sick.



TABLE 78.

FEEDING OF INFANTS UP TO SIX MONTHS OF AGE—PERIOD FROM JULY 11TH, 1928, TO JUNE 30TH, 1929.

Condition at end of 6 months	Percentage of 1535 children investigated.	Breast entirely.	BREAST FEEDING ALONE UP TO END OF						BREAST FEEDING JOINTLY WITH ARTIFICIAL UP TO END OF						Artificial entirely.	Not Fed.
			3 weeks	1st m'nth	2nd m'nth	3rd m'nth	4th m'nth	5th m'nth	1st m'nth	2nd m'nth	3rd m'nth	4th m'nth	5th m'nth	6th m'nth		
Satisfactory ... ..	82.2	40.0	2.4	7.9	8.3	7.4	5.1	4.2	.71	1.5	1.8	.4	.7	2.6	15.2	—
Fairly Satisfactory.	8.7	23.8	3.7	6.7	8.9	8.2	2.9	8.9	2.9	—	1.4	1.4	7.4	3.7	26.1	—
Unsatisfactory ...	3.2	12.0	2.0	18.0	8.0	4.0	2.0	2.0	2.0	2.0	0.0	2.0	0.0	8.0	38.0	—
Dead ... ..	5.7	21.6	6.7	3.4	6.8	5.7	0.1	4.5	1.1	1.1	0.0	1.1	1.1	0.0	19.3	21.7



*PART VIII.*

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Miscellaneous.

# ULTRA-VIOLET LIGHT TREATMENT.

Ultra-Violet Light treatment was carried out in Ward V annexe at the Corporation Hospital until the beginning of July, when the undue prevalence of scarlet fever caused temporary closure of the Clinic as the Ward was required for the reception of cases of infectious disease. Until that date four afternoon sessions were held each week, and special cases were seen at other times by appointment. As the ward is still occupied by cases of scarlet fever the Clinic has not been re-opened as yet. School Medical, Tuberculosis, Maternity and Child Welfare cases, as well as those referred from private practitioners, are treated at this Clinic.

TABLE 79.

## REFERRED FROM MATERNITY & CHILD WELFARE DEPARTMENT.

Condition	Cases		Cases Discharged						Still under Treatment		Average No. of Exposures in cases discharged as cured				No. of Exposures so far giver to all cases attending		Ceased attending before completion of Treatment	
			Cured		Much Improved		No Change				Carbon Arc		Mercury Vapour		Carbon Arc	Mercury Vapour		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F			M	F
Rickets .....	10	1	-	-	1	-	1	-	6	-	29	-	-	-	213	-	2	1
Debility .....	4	7	-	-	2	-	-	-	1	3	11	-	-	-	147	-	1	4
Malnutrition ....	2	-	-	-	-	-	-	-	1	-	-	-	-	-	27	-	1	-
Other Diseases ..	2	1	-	-	-	-	-	-	2	-	-	-	-	-	25	-	-	1
TOTAL .....	18	9	-	-	3	-	1	-	10	3	-	-	-	-	512	-	4	6

## REFERRED FROM TUBERCULOSIS DEPARTMENT.

Tub. Adenitis ....	1	1	-	-	-	-	-	-	1	1	-	-	-	-	42	92	-	-
Tub. Peritonitis ..	5	2	-	-	-	-	-	-	5	1	-	-	-	-	227	90	-	1
T.B. Ankle .....	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	1
Tub. Spinal Caries.	1	-	-	-	-	-	-	-	1	-	-	-	-	-	-	30	-	-
Tub. of Knee ....	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	44	1	-
Lupus .....	4	1	-	-	-	-	-	-	4	1	-	-	-	-	43	235	-	-
Others .....	7	4	2	1	-	1	-	-	3	-	109	26	-	59	450	64	2	2
<b>TOTAL .....</b>	<b>19</b>	<b>9</b>	<b>2</b>	<b>1</b>	<b>-</b>	<b>1</b>	<b>-</b>	<b>-</b>	<b>14</b>	<b>3</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>762</b>	<b>561</b>	<b>3</b>	<b>4</b>

TABLE 80.

SENT BY PRIVATE PRACTITIONERS.

Condition	Cases		Cases Discharged						Still under Treatment		Average No. of Exposures in cases discharged as cured				No. of Exposures so far given to all cases attending		Ceased attending before completion of Treatment	
			Cured		Much Improved		No Change				Carbon Arc		Mercury Vapour		Carbon Arc	Mercury Vapour		
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Carbon Arc	Mercury Vapour	M	F
Pulmonary T.B...	-	1	-	-	-	-	-	-	-	1	-	-	-	-	22	72	-	-
T.B. Adenitis ....	2	1	-	-	-	-	-	-	1	1	-	-	-	-	204	-	1	-
Rickets .....	3	1	-	-	-	-	-	-	2	1	-	-	-	-	67	-	1	-
Debility .....	4	3	1	-	-	-	-	-	2	3	20	-	-	-	214	78	1	-
Encephalitis ....	1	-	-	-	-	-	-	-	1	-	-	-	-	-	68	-	-	-
Paraplegia .....	1	-	-	-	-	-	-	-	1	-	-	-	-	-	54	-	-	-
T.B. Peritonitis ..	2	-	-	-	-	-	-	-	2	-	-	-	-	-	177	-	-	-
Ulcer Legs .....	-	1	-	-	-	-	-	-	-	1	-	-	-	-	100	-	-	-
Lupus .....	3	2	-	-	-	-	-	-	3	1	-	-	-	-	39	456	-	1
Bronchitis .....	-	2	-	-	-	-	-	-	-	-	-	-	-	-	32	31	-	2
	16	11	1	-	-	-	-	-	12	8	20	-	-	-	977	337	3	3

**TABLE 81.****SUMMARY.**

Complaint	No. of Cases	No. of Exposures	Type of Lamp used	Results of Treatment			Still under Treatment	Ceased before Completion of Treatment
				Cured	Much Improved	No Improvement		
Rickets .....	19	322	C.	1	1	—	12	5
T.B. Adenitis .....	11	547	C. & M.	1	—	—	8	2
T.B. Peritonitis .....	12	778	C. & M.	—	—	—	10	2
Pre-Tubercular .....	14	1205	C. & M.	2	—	—	12	—
Lupus .....	10	773	C. & M.	—	—	—	9	1
Anæmia .....	1	6	C. & M.	—	—	—	1	—
Encephalitis .....	2	200	C. & M.	—	—	—	2	—
Bronchitis .....	8	326	C. & M.	—	—	—	5	3
Malnutrition .....	2	16	C.	—	—	—	—	2
Phthisis .....	14	932	M.	—	4	—	7	3
T.B. Spine .....	1	30	M.	—	—	—	1	—
Debility .....	27	1208	C.	2	—	—	21	4
Eczema .....	1	32	C. & M.	—	—	—	1	—
Hæmophilia .....	1	42	C.	—	—	—	1	—
Varicose Ulcers .....	1	100	M.	—	—	—	1	—
T.B. (Misc.) .....	4	286	M.	2	—	—	2	—
T.B. Knee .....	1	44	M.	—	—	—	1	—
T.B. Ankle .....	1	6	C. & M.	—	—	—	—	1
Mental .....	1	8	C.	—	—	—	1	—
Other Conditions.....	2	49	C. & M.*	1	—	—	1	—
<b>TOTALS .....</b>	<b>133</b>	<b>6910</b>		<b>9</b>	<b>5</b>	<b>—</b>	<b>96</b>	<b>23</b>

\* C—Carbon Arc Lamp.

M—Mercury Vapour Lamp.



## BACTERIOLOGICAL AND PATHOLOGICAL EXAMINATIONS.

Facilities are available for the examination of pathological and bacteriological specimens at the Corporation Hospital, at the Royal Infirmary, and at the Public Health Laboratories at Manchester and Liverpool.

The appended Table gives particulars of examinations carried out during 1929.

For particulars of work carried out at the Corporation Hospital Laboratory see Table 50.

TABLE 82.

<i>Nature of Test.</i>	<i>Royal Infirmary.</i>		<i>Liverpool University.</i>		<i>Manchester University.</i>		<i>Total.</i>
	<i>Pos.</i>	<i>Neg.</i>	<i>Pos.</i>	<i>Neg.</i>	<i>Pos.</i>	<i>Neg.</i>	
For Typhoid—Widal Test ..	—	—	—	—	—	14	14
For Gonococci—							
For Private Practitioners ..	—	—	—	—	8	19	27
For V.D. Clinic (B.R.I.) ..	232	805	—	—	—	—	1037
For Spirochetes... ..	—	1	—	—	—	—	1
Wassermann Test—							
For Private Practitioners ..	59	139	—	—	—	—	198
For V.D. Clinics .. ..	218	592	—	—	—	—	810
	509	1537	—	—	8	33	2087

Two samples of shell-fish were submitted to the Public Health Laboratory, Manchester, for bacteriological examination.

Thirty-five samples of fæces and urine for Typhoid, and one of pleural fluid were also examined.

## NURSING IN THE HOME.

Domiciliary nursing of cases of Measles, Whooping Cough, Diarrhœa, Puerperal Fever, Ophthalmia Neonatorum, Influenzal Pneumonia, and Tuberculosis is undertaken by the District Nursing Association.

The Corporation pay the Association an annual retaining fee of £35 for these services, with an additional payment of 8d. per visit.

The appended Table gives particulars of the work carried out by the District Nursing Association in this respect during 1929 :—

TABLE 83.

## HOME NURSING BY DISTRICT NURSES.

Disease	On books Jan. 1st 1929	New Cases	Cured	Died	Hospital	Remain- ing end of 1929	Visits
Tuberculosis .. ..	4	24	6	14	1	7	1563
Pneumonia .. .. .	8	150	105	39	13	1	2571
Puerperal Fever and Pyrexia .. .. .	..	4	3	..	..	1	73
Ophthalmia Neonatorum .. ..	..	6	6	..	..	..	123
Diarrhœa .. .. .	..	6	5	..	1	..	86
Measles.. .. .	..	1	1	..	..	..	12
TOTAL .. .. .	12	191	126	53	15	9	4428

## PUBLIC HEALTH PROPAGANDA.

Although no Health Week has been held during the year, publicity in health has been carried on by means of lectures and addresses given by members of the Health Department. In all 48 lectures were given to audiences totalling approximately 4,577.

## LIST OF LECTURES GIVEN DURING THE YEAR 1929.

<i>Lecturer.</i>	<i>Where held and Title of Lecture.</i>	<i>Date.</i>
Dr. V. T. Thierens	... .. Park Road Congregational Church Girls' Guild, "Some Everyday Ailments, Their Significance and Prevention."... ..	5/2/29
"	... .. Blackburn and District Medical Society, "Some Points in the Diagnosis of Small-pox" ... ..	6/2/29
"	... .. Belthorn Congregational Church Girls' Guild, "Clean Milk" ... ..	12/2/29
"	... .. Furthergate Working Men's Club, "The Care of the Adolescent" ... ..	28/2/29
Dr. G. C. F. Roe	... .. Blackburn and District Medical Society, "The Therapeutic Uses of Anti-Diphtheritic Toxin" ... ..	6/2/29
Dr. J. St. George Wilson	... To Local Midwives and Nurses, "Ante-Natal Care" ... ..	20/3/29
Dr. V. T. Thierens	... .. Audley Range Congregational Church Young People's Fellowship, "Housing in Relation to Health" ... ..	21/3/29
"	... .. Clerical Association, "The Housing and Social Welfare Problem" ... ..	26/3/29
"	... .. College of Nursing and S. John Ambulance Brigade, "Immunity to, and Control of, Infectious Disease" ... ..	4/4/29
Dr. A. A. Gemmell	... .. To Local Midwives and Nurses, "Toxæmias of Pregnancy" ... ..	30/4/29
Dr. Ruth Nicholson	... .. To Local Midwives and Nurses, "Ante-partum Hæmorrhage" ... ..	29/5/29
Dr. V. T. Thierens	... .. St. Philip's Church Mothers' Union, "The Preservation of Health" ... ..	6/6/29
"	... .. Rover Crew, Parochial Hall, Trinity Street, "The Work of a Public Health Department."... ..	14/8/29
Prof. H. Briggs	... .. To Local Midwives and Nurses, "Difficult Labour" ... ..	10/9/29
Dr. V. T. Thierens	... .. Park Road Congregational Church Girls' Guild, "Housing in Relation to Health" ... ..	22/10/29
Dr. Frances Ivens	... .. To Local Midwives and Nurses, "Post-Partum Hæmorrhage" ... ..	29/10/29
Dr. V. T. Thierens	... .. Blackburn Rotary Club, "Work of a Public Health Department" ... ..	30/10/29
Dr. I. M. McLachlan	... .. Furthergate Working Men's Club, "Infectious Diseases, Their Cause and Prevention" ... ..	14/11/29

<i>Lecturer.</i>	<i>Where Held and Title of Lecture.</i>							<i>Date.</i>
Dr. V. T. Thierens	...	...	Joint Co-operativo Society Guilds, Duke Street,					
			" Prevention of Diphtheria "	...	...	...	...	3/12/29
"	...	...	Labour Women, Cort Street,					
			Diphtheria "...	...	...	...	...	11/12/29
"	...	...	Furthergato Working Men's Club,					
			Government Act "	...	...	...	...	12/12/29
<hr/>								
Dr. G. C. F. Roe	...	...	Mill Hill Evening Institute	...	...	...	...	29/1/29
Dr. V. T. Thierens	...	...	Blakey Moor Girls' School	...	...	...	...	21/3/29
"	...	...	St. Anne's Girls' School	...	...	...	...	2/5/29
"	...	...	St. Paul's, Mixed and Infants	...	...	...	...	3/5/29
"	...	...	C.E. Central, Girls' School	...	...	...	...	15/5/29
"	...	...	Mill Hill Council, Junior and Infants	...	...	...	...	16/5/29
"	...	...	Cedar Street Infants' School	...	...	...	...	16/5/29
"	...	...	Maudsley Street Infants' School	...	...	...	...	6/6/29
"	...	...	Bangor Street School (All Departments)	...	...	...	...	2/10/29
Dr. I. M. MacLachlan	...	...	St. Michael's School, Mixed Department	...	...	...	...	4/10/29
"	...	...	St. Anne's School, Infants' Department	...	...	...	...	8/10/29
Dr. V. T. Thierens	...	...	St. Silas' School, Mixed Department	...	...	...	...	9/10/29
"	...	...	St. Mary's School, Boys' Department	...	...	...	...	10/10/29
"	...	...	Christ Church School	...	...	...	...	11/10/29
"	...	...	Park Road Council School	...	...	...	...	16/10/29
"	...	...	Corporation Park Open-Air School	...	...	...	...	22/10/29
Dr. I. M. MacLachlan	...	...	St. Aidan's School, Infants' Department	...	...	...	...	7/11/29
"	...	...	St. Thomas's Senior Department (in Wescoe Memorial Hall)	...	...	...	...	13/11/29
Dr. V. T. Thierens	...	...	Cedar Street School, Junior Department	...	...	...	...	21/11/29
"	...	...	Moss Street School, Junior and Infants' Depts	...	...	...	...	11/12/29
Dr. I. M. MacLachlan	...	...	St. James' School, Guide	...	...	...	...	17/12/29
Dr. V. T. Thierens	...	...	St. Matthew's School, Infants' Department	...	...	...	...	17/12/29
"	...	...	St. Bartholomew's School, Infants' Department	...	...	...	...	18/12/29
"	...	...	Emmanuel School, Infants' Department	...	...	...	...	18/12/29
Dr. I. M. MacLachlan	...	...	Bank Top School, Mixed Department	...	...	...	...	19/12/29
Dr. V. T. Thierens	...	...	Mill Hill Council School, Senior Department	...	...	...	...	19/12/29
"	...	...	Witton Infants' School	...	...	...	...	19/12/29

In connection with the lectures given at the schools in the district I would like to express my thanks to the head teachers for the trouble taken by them in making the necessary arrangements. In many instances the head teachers ensured a good muster of parents and other relatives by means of written invitations issued from the schools.

The subjects discussed have included : (1) Personal Hygiene ; (2) Personal Responsibility for the Maintenance of Health ; (3) The Functions and Objects of the School Medical Service ; (4) Diphtheria Prevention.

The Health Visitors have continued the Talks to Mothers at the Centres. Six lectures every fortnight have been delivered throughout the year, except during the summer quarter.

The Talks by Health Visitors to school children attending the Domestic Science Centre were also continued throughout the year.

## PREVENTION OF BLINDNESS.

### PUBLIC HEALTH ACT, 1925, SECTION 66.

With the object of preventing blindness, the Local Authority provides beds at the Corporation Hospital for the reception of such cases of ophthalmia neonatorum as cannot be properly cared for in their own homes.

The Blackburn Corporation have an agreement with the Blackburn and District Nursing Association to undertake the domiciliary nursing of cases of ophthalmia neonatorum. Six cases, to which 123 visits were paid, were so nursed during the year.

## CARE OF THE BLIND.

### THE BLIND PERSONS ACT, 1920, SECTION 2, SUB-SECTION 1.

The Joint Finance Committee for the Blind, which organises and co-ordinates voluntary efforts for the Blind, has continued to function successfully. During the year the Committee has raised £2,000 by voluntary effort, which sum has been distributed, after deduction of administrative and working expenses, in the proportion of 80% to the Workshops, and 20% to the Visiting Society.

A scheme submitted by the Visiting Society whereby each necessitous unemployable blind person will be assured of a minimum income of 22/6 per week has been approved by the Town Council. This scheme is estimated to cost the Corporation approximately £2,500 per annum.

In 1929 the Blind Persons Scheme cost the Corporation £1,300.



## THE BLACKBURN CORPORATION ACT, 1929.

Royal Assent was given to the above Act on the 10th May, 1929.

The Sanitary Clauses of the Act confer :—

- (1) Power to remove to an institution infirm and diseased persons in certain cases. (Sec. 76).
- (2) Right of entry into premises in case of dangerous infectious disease. (Sec. 77).
- (3) Further powers with relation to unsound food. (Sec. 79).
- (4) Further powers with relation to regulation dust bins. (Sec. 81).
- (5) Power to require the owner or occupier of premises used for the carrying on of an offensive trade to cease to use the premises for that purpose in certain cases. (Sec. 80).
- (6) Further powers with relation to common lodging-houses. (Sec. 82).

In addition, cases of food-poisoning have become notifiable under this Act. (Sec. 78).

During the year proceedings were instituted on one occasion under Sec. 76 of this Act, which provides for the removal to an institution, upon an order of a Court of Summary Jurisdiction, of :—

- (a) any aged, infirm, or physically incapacitated person who is residing in premises which are insanitary owing to any neglect on the part of the occupier thereof, or under insanitary conditions ; or
- (b) is suffering from any grave chronic disease.

This case was that of a bed-ridden female, aged 78 years, who was so physically enfeebled as to be unable to attend to herself or to keep her house in a fit and sanitary state.

The requisite order was granted by the Bench and the case removed to the Queen's Park Hospital.



TABLE 84.

METEOROLOGY, 1929.

Corporation Hospital Station, Height 560 feet.

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Totals
hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.
Amount of Bright Sunshine...	26 20	28 35	157 35	143 15	218 5	211 30	167 10	128 30	149 55	76 55	35 20	15 40	1358 50
Average per day .....	0 51	1 1	5 5	4 46	7 2	7 3	5 23	4 9	4 59	2 29	1 10	0 30	..
Maximum amount in one day.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	hrs. min.	..
	4 40	5 40	10 30	10 35	14 0	14 0	15 0	12 30	11 15	8 5	4 10	3 30	..
Total Rainfall (in inches)....	1.70	1.255	1.07	1.20	2.53	2.185	3.06	5.52	1.67	6.775	6.86	7.82	41.645
No. of days on which rain fell.	15	11	5	14	16	16	16	24	10	27	25	28	207
Av. Temp. at 9 a.m. (Fahr.)...	36.9	30.6	39.6	40.58	48.08	51.1	56.0	53.8	53.05	46.4	41.9	40.7	—
Temp. of earth at depth of 1ft.	34.3	34.9	36.05	42.9	49.5	54.3	56.7	57.0	56.5	49.5	43.2	41.2	—
Temp. of earth at depth of 4ft.	39.7	38.2	37.2	41.8	45.2	50.7	52.8	55.0	55.8	52.5	47.0	42.9	—
Highest Temp. in Shade .....	57.0	69.0	67.0	58.0	71.0	71.0	82.0	72.0	73.0	58.5	55.0	53.5	—
Lowest Temp. in Shade .....	23.0	12.0	16.5	29.0	32.5	39.0	39.0	45.0	40.0	30.0	23.0	29.0	—
Av. Temp. Sun (black bulb)...	39.7	41.9	75.1	97.4	122.0	118.0	113.0	111.0	105.0	87.6	64.6	56.5	—
Lowest Temp. on Grass .....	21.0	10.0	15.0	25.0	29.0	32.5	34.0	39.0	37.0	25.0	22.0	25.0	—
Highest cor. reading of barom.	30.612	30.635	30.586	30.228	30.238	30.394	30.373	30.223	30.431	30.338	30.365	30.588	—
Lowest cor. reading of barom.	29.749	29.474	29.948	29.490	29.173	29.307	29.427	29.235	29.544	28.978	29.151	28.368	—
Mean reading of barometer... (uncorrected)	29.534	29.431	29.745	29.491	29.389	29.422	29.462	29.364	29.529	29.161	29.081	28.944	—

## LOCAL POWERS RELATING TO PUBLIC HEALTH.

### 1.—BLACKBURN CORPORATION ACTS AND ORDERS :—

The Blackburn Improvement Act, 1882.  
 The Blackburn Water Act, 1885.  
 The Blackburn Corporation Act, 1892.  
 Local Government Board's Provisional Orders Confirmation (No. 14) Act, 1894.  
 Local Government Board's Provisional Orders Confirmation (No. 18) Act, 1897.  
 The Blackburn Corporation Act, 1901.  
 The Blackburn Corporation Act, 1908.  
 Local Government Board's Provisional Orders Confirmation (No. 9) Act, 1910.  
 The Blackburn Corporation Water Act, 1911.  
 Local Government Board's Provisional Orders Confirmation (No. 1) Act, 1919.  
 The Blackburn Corporation Act, 1922.  
 The Blackburn Corporation Act, 1929.

### 2.—ACTS OF PARLIAMENT ADOPTED BY THE COUNCIL :—

Parts II. & III. of the Public Health Acts (Amendment) Act, 1890, adopted by the Town Council, 2nd April, 1891.  
 INFECTIOUS DISEASES (PREVENTION) ACT, 1890, adopted by the Town Council (except Sections 14 and 19), 5th March, 1891.  
 Part III. of the Housing of the Working Classes Act, 1890, adopted by the Town Council, 5th August, 1897.  
 Public Health Acts Amendment Act, 1907 : Certain sections adopted by Orders of the Local Government Board on the 5th December, 1908 ; 5th January, 1910 ; and by Order of the Secretary of State, dated 27th October, 1909.

### 3.—BYE-LAWS AND REGULATIONS IN FORCE IN THE BOROUGH :—

General Bye-Laws, dated 12th January, 1855.  
 Bye-Laws for Regulation of Private Slaughterhouses, 25th October, 1877.  
 Regulations for Preventing Waste, Misuse, or Contamination of Water, 17th December, 1887.  
 Bye-Laws *re* Common Lodging Houses, 6th September, 1888.  
 Bye-Laws made under the Contagious Diseases (Animals) Act, 1878 to 1890, and the Dairies, Cowsheds, and Milkshops Orders of 1885 and 1886, 5th July, 1893.  
 Bye-Laws *re* Houses Let in Lodgings, 4th April, 1895.  
 Bye-Laws for Regulation of Offensive Trades, 4th March, 1897.  
 Bye-Laws with Respect to Management and Charges for Slaughterhouses Established by the Council, 20th March, 1901.  
 Bye-Laws for the Prevention of Carrying Carcases through the Streets, 25th April, 1901.  
 Bye-Laws *re* Cattle Markets, 1st June, 1905.  
 Regulations made under the Diseases of Animals Acts, 1894 to 1903 and Lancashire (Parasite Mango) Order, of 1908, 9th February, 1910.  
 Regulations made under the Diseases of Animals Acts and Glanders or Farcy Order of 1920, 17th February, 1921.  
 County Borough of Blackburn Offensive Trades Confirmation Order, 1922, declaring Rag and Bone Dealing to be an Offensive Trade.  
 Bye-Laws *re* Tents, Vans, Sheds and Similar Structures, 15th May, 1924.  
 Bye-Laws *re* Houses Let in Lodgings, 20th June, 1924.

# MINISTRY OF HEALTH ORDERS, Etc., 1929.

## STATUTES :—

Local Government Act, 1929.

Artificial Cream Act, 1929.

## REGULATIONS :—

- No. 322 ... 22/4/29 ... The Local Authorities (Assisted Housing Schemes) Amendment Regulations, 1929.
- No. 371 ... 14/5/29 ... The Registration of Births Regulations, 1929.

## ORDERS :—

- No. 283 ... 18/4/29 ... The Sale of Food (Revocation) Order, 1929.
- No. 640 ... 15/8/29 ... The Vaccination Order, 1929.

## CIRCULARS :—

- No. 955 ... 4/1/29 ... Influenza.
- No. 961 ... 27/2/29 ... Public Health (Imported Food) Regulations, 1925.
- No. 964 ... 7/3/29 ... Pollution of Rivers.
- No. 969 ... 16/3/29 ... Treatment of Tuberculosis.
- No. 1000 ... 10/4/29 ... The Local Government Act, 1929.
- No. 989 ... 24/5/29 ... Artificial Cream Act, 1929.
- No. 986 ... 3/5/29 ... Export of Meat Food Products to Canada.
- No. 992 ... 19/6/29 ... Venereal Diseases.
- No. 993 ... 1/7/29 ... Training and Employment of Blind Pianoforte Tuners.
- No. 1023 ... 22/7/29 ... (1) Local Government Act, 1929 ; (2) Venereal Diseases.
- No. 1403 ... 1/7/29 ... Training of Blind Pianoforte Tuners.
- No. 1021 ... 8/7/29 ... Small-pox Contacts proceeding Abroad.
- No. 1022 ... 31/7/29 ... Maternity Mortality.
- No. 1025 ... 19/8/29 ... Vaccination.
- No. 1025 (a) 19/8/29 ... ..
- No. 1025 (b) 19/8/29 ... .. (England and Wales).

## MEMORANDA :—

- Memo. 2 (Med.). ... Memorandum on Influenza. (Revised Edition).
- " 139 ... Bacteriological Tests for Graded Milk.
- " L.G.A. 1 ... Transfer of Functions of Guardians.
- " " 2 ... Model Administrative Scheme for Use of County Council.
- " " 3 ... Transfer of Functions of Guardians.
- " " 4 ... Model Administrative Scheme for Use of County Borough Councils.
- " " 5 ... (1) Local Government Act, 1929 ; (2) Maternity and Child Welfare ; (3) Voluntary Associations.
- " " 6 ... Maternity and Child Welfare.
- " " 7 ... Maternity and Child Welfare.
- " " 18 ... Transfer of Functions of Guardians (Section 4).
- " " 21 ... Transfer of Functions of Guardians (Formation of Guardian Committee Areas).
- Memorandum on Water Shortage.

Memo. L.G.A.	22	...	(1) Local Government Act, 1929; (2) Maternity and Child Welfare; (3) Voluntary Associations.
"	"	19	(1) Local Government Act, 1929.
			(2) Grants in respect of the Standard Year for :—
			(a) Maternity and Child Welfare;
			(b) Treatment of Tuberculosis;
			(c) Diagnosis and Treatment of Venereal Disease.
"	145 (M. & C.W.		Maternal Mortality and Child-birth.
"	L.G.A.	23	... Maternity and Child Welfare.

### MINISTRY OF AGRICULTURE AND FISHERIES.

No. 1038	...	27/12/28	...	The Foot and Mouth Disease (Infected Areas Restrictions) (Amendment) Order of 1924.
" 201	...	27/3/29	...	The Agricultural Produce (Grading and Marking) (Broccoli) Regulations, 1929.
" 350	...	7/5/29	...	The Agricultural Produce (Grading and Marking) (Tomatoes and Cucumbers) Regulations, 1929.
" 419	...	3/6/29	...	The Foot and Mouth Disease (Infected Areas Restrictions) Amendment Order of 1929.
" 186	...	21/3/29	...	The Quarantine Stations (Regulations) Order of 1929.
" 246	...	10/4/29	...	The Quarantine Stations (Regulations) Order of 1929 No. 2.
" 141	...	30/8/29	...	Glanders and Farcy Order, 1929.
" 4753	...	10/8/29	...	Glanders and Farcy Order, 1929.
" 812	...	26/9/29	...	The Agricultural Produce (Grading and Marking) (Beef) Regulations, 1929.

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